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THIS WEEK'S NEWS

PAGE

MR. FRANK LLOYD WRIGHT has been selected to receive the Gold Medal of The American Institute of Architects, the highest honour of that body. 729

BELFAST CORPORATION HOUSING COMMITTEE have appointed Mr. J. W. Adamson, A.R.I.B.A., deputy borough architect of Huddersfield, as housing architect of Belfast. 729

LAYOUT STUDIES have shown that three-storey houses designed by the architects' section of the Poplar borough engineer's department may be sited to a density of over 21 houses to the acre, providing up to 40 per cent. increase in accommodation over two-storey development. 730

A CORRESPONDENT WRITES that, if Parliamentary time permits, the Minister of Health hopes to bring forward legislation for assisting the conversion and adaptation of existing houses. 732

THE WORK of repairing the Boardroom of the old Admiralty Building in Whitehall is now being carried out and the carving and panelling, which were removed to a place of safety during the war, are being reinstated. 733

THE BUILDING of new premises for the Bank of British West Africa, at Lagos, Nigeria, is described and illustrated on page 734

THE FIRST post-war housing scheme of the Borough of Hemel Hempstead is described and illustrated on page 736

THE MINISTRY OF EDUCATION has announced that the target for educational building in 1949, fixed in the light of the estimated supply of labour and materials, will be £50m.-£55m. Changes in procedure designed to give local education authorities more scope and to simplify existing machinery for handling building work are also detailed. 742

IN HIS ADDRESS to members of the Town Planning Institute, on December 9, Mr. Rowland Nicholas, C.B.E., discussed a suggestion made by the Minister of Town and Country Planning that planners should re-examine, in the light of new planning and the increased power of local authorities, the doctrines which had hitherto been accepted. 743

THE CENTRAL LAND BOARD announces that it will accept a general authority from a claimant, under Part VI of the Town and Country Planning Act, authorising a professional adviser or agent to act for him. 745

AN EXTRACT from an article in a recent issue of "The British Zone Review" states that 3,700,000 new dwellings are required in the British Zone in Germany. 745

NEW METHODS OF HOUSE CONSTRUCTION

THE vast programme of house building awaiting us at the end of the war led to much speculation on how economies in labour and materials might be achieved by non-traditional means. During the war itself the Interdepartmental Committee on House Construction—the Burt Committee—prepared its report, laying down basic standards and surveying the new methods developed in the inter-war period. The Ministry of Works carried out research into new systems of construction and the possibilities of prefabrication. The latter was expected to make a considerable contribution towards solving the problems of speed of erection and cost. The second Burt report reviewed nine of the experimental houses which had been evolved to answer this need.

The actual outcome of all this activity has been disappointing. There has been no consistency of approach, and the cost of prefabrication has proved very high for a dwelling of limited life. But the present high level of building costs has forced a continued investigation into alternative methods, the latest results of which are published as "New Methods of House Construction,"* the fourth Special Report in the new Ministry of Works series of National Building Studies.

The report declares that the new methods were aimed at a threefold purpose; to reduce the total site labour by prefabrication; to reduce the skilled labour on the site; and to save human effort by an increase in the use of machinery. Steel had seemed an admirable material for prefabricated components because site work can be a rapid and dry process of assembly whilst the materials themselves form valuable scrap when the house is worn out. The report makes it clear, however, that the alternative materials to be used must be economical in the consumption of fuel and that steel and timber, still in short supply, must be reduced as much as possible. In consequence, of the nine new methods of construction dealt with, all but one have concrete as their staple material. Two of the concrete houses were cast *in situ*. The others have varying forms of precast post and panel or large wall units. Many people may be surprised to learn that the traditional brick house requires 12 tons of coal for the manufacture of the bricks compared with the 8 tons or so consumed by the concrete houses. This is not a saving over a house built of Fletton bricks, which requires less fuel than most of the concrete systems.

The investigations were carried out on groups of about 50 houses of each type. Ministry officers observed the expenditure in cost and man-hours for each operation on the site. The man-hours spent on manufacturing the factory components were also recorded. The results were corrected by statistical analysis to allow for lack of uniformity in size, planning and amenities of the different types. By correction the results may be taken to apply to any site by the addition or subtraction of a "confidence interval."

The results are not likely to cause a sensation by any

* H.M. Stationery Office. Price 1s.

means, but this is partly due to the fact that in these experiments the new methods were applied only to the external walls, party walls and partitions. These account for only one-third of the total site labour. If the methods were extended to the whole house considerably greater savings might be effected. The majority of the non-traditional houses show a saving in site man-hours and in total man-hours. As would be expected, the factory labour required is greater for most of the precast houses than it is for the traditional or the *in situ* types.

The relative costs of the houses are put forward with less assurance than is the man-power taken to build them. The two *in situ* houses, which do not mainly rely on a prefabrication process, reveal a significant saving over the brick houses. The costs of the houses with precast components have been difficult to assess. The overhead charges of the manufacturers vary according to the continuity of production and would only be economic if there were a steady demand. To maintain low costs the new systems require accurate phasing of the production of the factory-made elements with their erection on the site. With any methods involving new techniques, small-scale experiments are bound to be deceptively expensive because of the initial unfamiliarity of the processes to the operatives and the time taken to build up an efficient organisation. The report suggests that the techniques should be made available to operatives and supervisory grades in the form of erection manuals.

Building the traditional house has developed into a smooth-running organisation and there should be no delay in putting it into action. It is obvious that to be successful the factory methods call for large-scale production to meet a long-term policy on the part of the Government departments responsible. It is also questionable whether any of these new methods would prove cheaper than the traditional house if the productivity of building labour—one of the main reasons for to-day's spiralling building costs—were to regain its pre-war level.

The present report is primarily concerned with the economics of the new methods and their statistical presentation. It does contain photographs of some of the houses, but these are not related to the text nor are there any constructional details of the methods used. The necessity to mass-produce the factory house, if it is to compete with established methods, raises the problem of architectural monotony. However pleasing the individual design and however attractive the site lay-out, the prospect of bulk repetition of a few houses throughout the country depresses the spirit. Variety might be achieved by ringing the changes on a number of standard designs or better, by manufacturing prefabricated units which would allow the architect an opportunity of adjusting the plans to particular sites and needs, and of determining the elevations as he thinks fit. It may well be that falling building costs will renew the unchallenged position of the brick house and render these qualms purely academic.

THE NEW COMMONS TAKES SHAPE. The new Chamber for the House of Commons at Westminster is now taking a definite shape. The constructional work is well advanced and the timbering of the roof is going ahead. This picture shows an interior of the new Chamber looking north, showing the bench steppings and galleries. Sir Giles Scott, O.M., R.A., is associated with Mr. Adrian Gilbert Scott, F.R.I.B.A., in the design.

NOTES AND NEWS

Bankside Power Station.

THE Bankside power station controversy of last year will still be fresh in the minds of many. There were, it will be remembered, two main points of objection to the establishment of this power station on the site opposite St. Paul's. The first was its effect on the town planning of the vicinity, and the second the danger from fumes to the stonework of the Cathedral. Assurance by the Minister of Town and Country Planning that steps would be taken to prevent the latter peril, probably through oil-fired boilers, was a factor in easing public opinion in regard to the scheme.

A letter which appears in *The Times* of December 16, over the signatures of Mr. E. H. Keeling and Mr. T. C. Skeffington-Lodge—both members of the Amenities Group of the House of Commons—raises the doubt whether Mr. Silkin's pledge will, in fact, be honoured. The letter runs:—"On February 5, 1948, the Minister of Fuel and Power, asked whether he could confirm the above assurance, replied, 'Yes.' As late as September 23 last, in answering a question of which due notice had been given, he did not challenge a statement therein that the Government were pledged not to proceed unless oil fuel was found not to be harmful to buildings near by. He added that the result of the promised test of methods of eliminating sulphur would not be available before the spring.

"On November 18, the Minister would not give any promise that if no way was found of making the fumes harmless to St. Paul's the project would be abandoned. Thus repeated and unconditional ministerial guarantees have been thrown overboard, and those whom they lulled into a sense of security have now to be content, 'because of the increasingly urgent need for new generating capacity,' with an assurance that 'there is no doubt about the practicability of eliminating the fumes.'"

"Alice Through the Fibreglass."

THE A.A. Panto., thus titled, was produced before an enthusiastic audience in a rejuvenated Tavistock Theatre on Thursday of last week. Written, composed and produced in the best co-operative manner, there are no names or credit lines in the programme (how we wish some film producers would take the hint), and therefore there can be no packdrill. Not that the latter is required; production was slick, costumes excellent and ingenious, scenery and dropscenes delightful, acting enthusiastic and, in some cases, of high quality, music agreeable, and the sketches for the most part amusing and with point. Much of the humour and wit is, of course, direct from Bedford-square, and to some of the audience the climax of one or two scenes seemed to have been lost on the way, but the antics of Bleary, Humpty Dumpty (was it weally Samuely?), the Mock Turtle, the Mad Hatter, the Carpenter and the Wet Knight, among others, proved a perfect foil for a talented and charming Alice, while over all brooded the Voice of the Infurneaux (whose home is surely over Jordan). There were many good gags and some light verse in the Carrollian tradition, notably:—

T'was Tecton, and the prestressed beams
Did cantilever in the section;
The ceiling was in chocolate creams,
Which oozled in deflection.

In short, a very good show, ably supported by a students' sextette which discoursed music for most modern tastes, and a bevy of charming usherettes—the whole show being backed with the enthusiastic efficiency of many hands before and behind the curtain, which showed no signs of wilting under the strain of twice-nightly performances on two evenings.

American Gold Medal for F.L.W.

MR. FRANK LLOYD WRIGHT has been selected to receive the Gold Medal of The American Institute of Architects, the highest honour of the organisation. The Gold Medal will be presented at the 81st annual convention of The Institute in Houston, Texas, on March 17.

R.I.B.A. Lectures for Children.

THREE informal talks for boys and girls will be given at the R.I.B.A. during the Christmas Holidays by Mr. Peter Shepheard, B.Arch., A.R.I.B.A., A.M.T.P.I. They will be illustrated by lantern slides and will be followed by questions and discussion. The title of the series is: "How an Architect Designs and Builds." The lectures will be given in the Henry Jarvis Memorial Hall at the R.I.B.A. headquarters, 66, Portland-place, W.1, at 3 p.m. on the following dates: Friday, December 31, Monday, January 3, and Wednesday, January 5. Tickets for all or any of the lectures may be obtained free on application to the Secretary, R.I.B.A., 66, Portland-place, W.1. Envelopes should be marked "Christmas Holiday Lectures."

L.C.C. Housing Exhibition.

THE Housing Committee of the London County Council is arranging for an exhibition at Charing Cross Underground Station, next February. The Council's housing work will be shown by drawings, plans, photographs and models, and a central feature of the exhibition will be a full-size model of a standard kitchen and bathroom, as now provided in the Council's flats and houses. The Metropolitan Borough Councils are taking part in the exhibition and the Metropolitan Boroughs' Standing Joint Committee will arrange for the exhibits illustrating their activities.

Gunfire Near Holy Island.

A BATTLE which has been waged in Northumberland by fishermen, farmers, bird-lovers and Christians on the one hand and the War Department on the other, has resulted in a victory for the Government. The War Department wants to fire guns at Ross Links, Northumberland, during the summer months, and the Government have tried to soothe fishermen and farmers by pointing out that bye-laws will be introduced to safeguard fishing, and that grazing can continue with the usual arrangements for compensation. Bird-lovers have been told that it has not been established that the proposed anti-tank range will have any serious effect on the bird sanctuaries at Ross Links and the neighbouring Farne Islands. Evidence available suggests that a bird is not so touchy as a human being in the presence of gunfire. Thus the Government has overcome opposition to the scheme, which, it believes, can only be carried out satisfactorily at this part of the coast, where there is a large area of sea free from shipping. In view of this decision Christians who make a pilgrimage to Holy Island, the birthplace of Christianity in England, will be reminded frequently of the importance of their existence by the sounds symbolic of war on the near-by coast—sounds which the Bishop of Newcastle tried to prevent on behalf of ecclesiastical interests when a public inquiry was held at Newcastle-on-Tyne last June.

Bristol Society of Architects.

THE second (November) quarterly number of the "Journal of the Bristol Society of Architects," just issued, continues the good work begun by the first. The articles are lively and readable, and reports are given of the Society's recent activities, together with full particulars of the winter programme. A portrait of the President, Mr. R. S. Redwood, is the frontispiece, and there is an illustration of a model of a country house designed and executed by Michael J. B. Hitchings, of the R.W.A. School of Architecture. Production is excellent. Copies, price 1s., from the Society's office, 25, Great George-street, Bristol, 1.

Prizes for Measured Drawings.

The prizewinners in *The Builder* competition for Measured Drawings, open to students of the Bartlett School of Architecture, University College, London, are: *Senior Prize* (equally divided): E. W. Bestow, 32a High-street, Esher, Surrey; and R. F. H. Goebel, 47 Shepherds Hill, Stoughton, Guildford, Surrey. *Junior Prize* (equally divided): N. V. Hyde, Lindenhurst, Coach-drive, Hitchin, Herts; and H. C. J. Ridgeway, 17 Collison-street, Radford, Nottingham.

Suez Canal Improvement Plans.

SUBJECT to the grant of a concession for additional land, the Suez Canal Co. has decided on an important programme of improvements based on the advice of an international consultative commission of civil engineers. The programme provides for cutting out of the desert a by-pass canal six miles long, approximately 30 miles from Port Said, which, it is believed, will reduce by several hours the time ships have to wait for convoys to be formed. The work is expected to take from two to three years. The canal is to be deepened by 20 in. over the whole of its length. The tanker mooring station in Lake Timsah is to be deepened, and a proposed enlargement of one of the basins in Port Said harbour will permit the berthing of 18 ships 660 ft. long, compared with nine ships 330 ft. long at present.

An M.o.W. Appointment.

THE Minister of Works has appointed Mr. A. J. Filer as Director-General of Building Materials in place of Mr. E. A. Seal, C.B., who was recently appointed Deputy Under-Secretary of State in the Foreign Office (German Section).

Belfast Housing Architect Appointed.

MR. J. W. ADAMSON, A.R.I.B.A., Deputy Borough Architect of Huddersfield, has been selected by Belfast Corporation Housing Committee as housing architect of Belfast, a new post, at a salary of £1,500 rising to £1,750. The Committee has decided not to proceed with the appointment of a Director of Housing, as distinct from Housing Architect.

Change of Address.

ON and after December 20, 1948, all communications, until now addressed to The District Surveyor, City of London District, either at 26, Martin-lane or 107, Fleet-street, E.C.4, should be addressed to 9, Carmelite-street, London, E.C.4. Tel.: Cen. 7631.

Professional Announcements.

MR. C. T. R. KELLY, A.R.I.C.S., will be commencing in private practice at 1, Trevor-street, Knightsbridge, S.W.1, from January 1 next, and copies of catalogues will be appreciated.

MR. A. CHESTER SMITH, A.R.I.B.A., A.M.T.P.I., has resigned his appointment with the Southend-on-Sea County Borough on being appointed Principal Assistant Architect to the North-East Metropolitan Regional Hospital Board, 11a, Portland-place, W.1.

COMING EVENTS

Thursday, December 30.

THE INSTITUTION OF CIVIL ENGINEERS.—"Building Big Ships," by Mr. J. Melville. (First of Christmas lectures to boys.) The Institution, Great George-st., S.W.1. 3 p.m. Subsequent lectures on January 3 and 4.

Friday, December 31.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.—"How an Architect Designs and Builds," by Mr. Peter Shepheard. (First of children's holiday lectures.) Henry Jarvis Memorial Hall, 66, Portland-pl., W.1. 3 p.m Subsequent lectures on Monday, January 3, and Wednesday, January 5.

FROM "THE BUILDER" OF 1848

Saturday, December 23, 1848.

FLEET DITCH.—From a paragraph in the London papers, it appears that about ten or more people residing at Gillingham, in Kent, have fallen victims to the Asiatic cholera. Their residences were on the banks of a creek, continually being stirred up by the tides. Now, at the last visit of the cholera in London, more genuine cases occurred on the line of the Fleet Ditch than in any other part of the Metropolis; and it does seem to me that the attention of the Commissioners of Sewers might be humanely directed to that abomination, the existence of which (nearly wholly uncovered from Peter-street to Ray-street, Clerkenwell, a distance of 1,000 feet) is not known to the public in general. I feel assured that if you can cause the ditch to be covered you will add another laurel to the many you have already gained. In addition to the Fleet Ditch being always open and the soil and filth from the north of the Metropolis always passing through it, the most obnoxious trades are carried on, and the whole neighbourhood is poisoned by continued stenches.—W. P. G.

PROPOSED THREE-STOREY HOUSES
for the Metropolitan Borough of Poplar

W. J. RANKIN, A.M.Inst.C.E., BOROUGH ENGINEER
C. H. WEED, A.R.I.B.A., PRINCIPAL ASSISTANT ARCHITECT

PRESSURE on sites in inner London has forced the greater part of the rehousing programme to take the form of flats, and the problem of attaining the required density of 136 persons per acre, and yet providing one third of the accommodation in individual houses, makes it necessary that these should be economical in terms of site frontage, if the remainder of the redevelopment in the form of multi-storey flats and maisonettes are to be planned in an open manner.

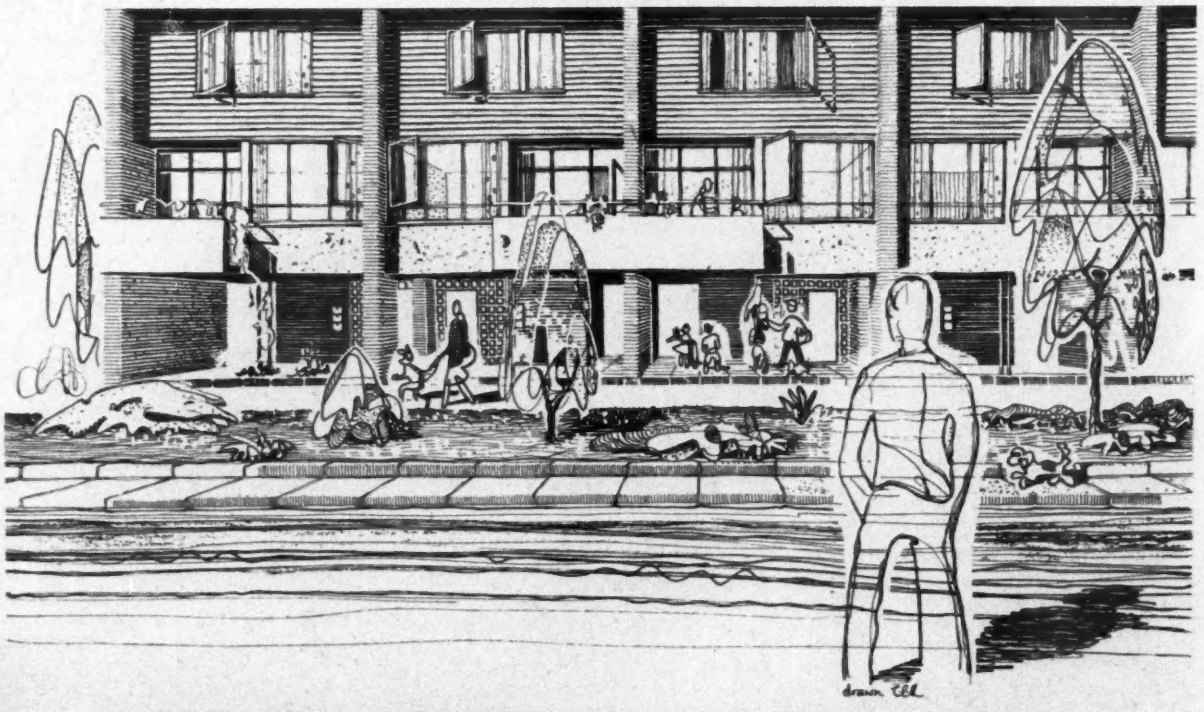
The perspective or model shown at the "Poplar Builds" exhibition, now touring the borough public libraries, illustrates the original sketch design. The load-bearing party walls were to have been 13½ in. cavity brickwork (solid on ground floor) with panel walls to the back and front facade; the panels to the upper floor of light-weight blocks faced with shingles; and the first floor up to window-cill height of no-fines concrete. It was intended to provide refuse chutes from the first floor, central heating from a boiler in the utility room and a tradesmen's hatch by the front door. These omissions and many modifications (as drawings show) have been made to meet the demands of economy and regulations where waivers of the bye-laws have not been granted.

The floors will be concrete, and the roof may now be of sheet copper on trussed purlins. Purpose-made windows to a module to suit the design have given way to standard windows, and the half-projecting balcony has now become fully recessed. The cavity panel walls will consist of 4½ in. brickwork and 2 in. breeze blocks internally.

The first floor is the living floor with living room and dining kitchen. Above are three bedrooms and a bathroom. The ground floor is small in area and contains only the entrance hall and w.c. and a utility room having an independent boiler for domestic hot water service and a sink and copper for laundry purposes. This floor having no habitable rooms will be 7 ft. 6 in. in height and the internal finishings, except for the entrance hall, will be of a utilitarian nature.

Terraces will be punctuated with larger houses having four bedrooms. The overall size of this variant is no greater than that of the smaller type, except that the ground floor accommodating the dining kitchen is 8 ft. 6 in. high. The second floor plan is identical with that of the smaller house, and the additional bedroom is on the first floor.

Layout studies have shown that these houses may be sited to a density of over 21 houses to the acre and providing up to 40 per

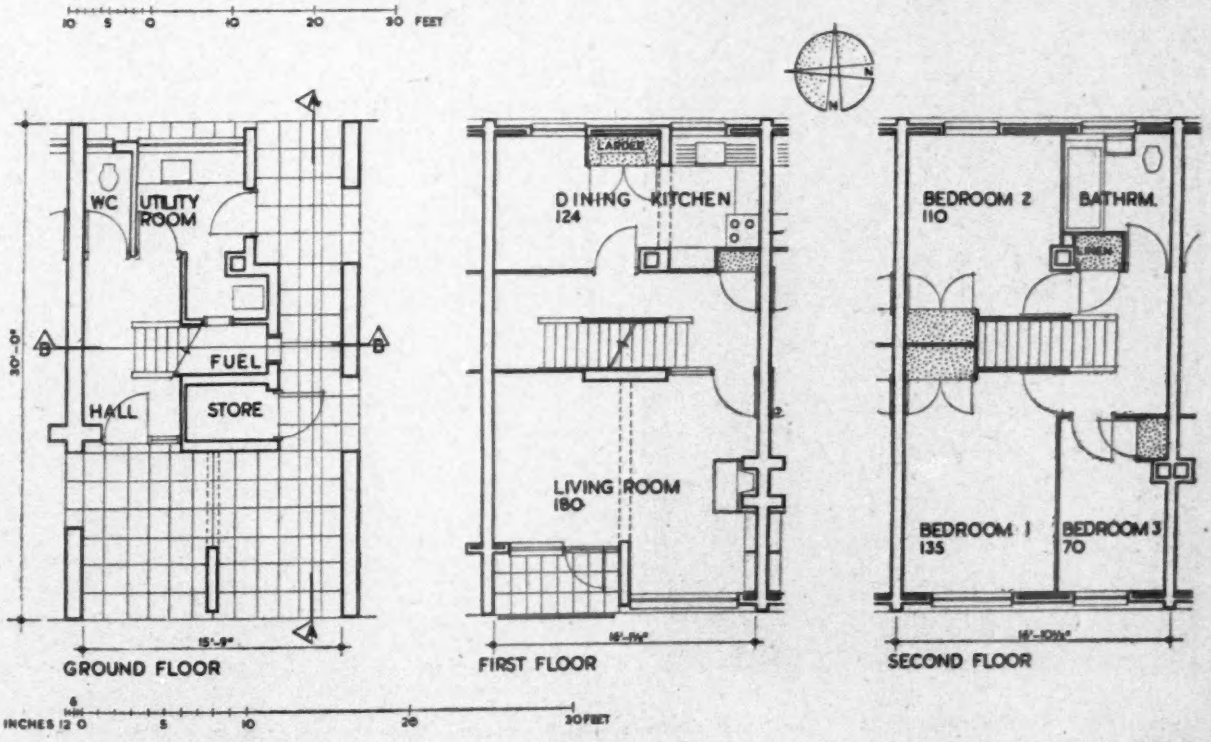


THREE-STOREY HOUSES, POPLAR: Perspective sketch of (revised) entrance elevation.

The maisonettes (as originally planned) from a model.

cent. increase in accommodation over two-storey development. The open ground floor facilitates access equally well from front or rear, enabling each terrace to be orientated correctly while reducing access roads and culs-de-sac to the minimum. Each house may have a small private garden and in addition each terrace may share a communal strip of grass about 40 ft. in width freely planted with shrubs and trees which can alternate with access ways between the terraces.

The designs have been prepared by the Borough Engineer, Mr. W. J. Rankin, A.C.G.I., A.M.Inst.C.E., M.I.Mun.E., A.M.P.T.I., and the Principal Assistant Architect in his Department, Mr. C. H. Weed, A.R.I.B.A.



NARROW FRONTED THREE STOREY TERRACE HOUSES

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Norwich Cathedral Choir Stalls.

TO THE EDITOR OF *The Builder*.

SIR,—Norwich Cathedral has a unique series of 62 fifteenth-century stalls, which cross the transept and extend into the first two bays of the nave. They originally accommodated the Prior, Subprior and the 60 monks of the original foundation.

The Ecclesiological Society has recently heard with concern that a passage has been cut through these stalls and seats detached from each side—the woodwork being sawn through to enable them to be removed. It is understood that the displaced stalls are to be "made up" into sedilia and placed in the presbytery. The history of the building is thus falsified and the interest of the stalls, as a continuous series, in a large measure destroyed.

The Society feels that these unhappy alterations raise an important general issue. So far as can be ascertained the stalls were removed by the Dean and Chapter without notice being given of their intentions and there is no evidence that professional advice was obtained or the Diocesan Advisory Committee consulted, and the Society would like to make public its conviction:

(a) that the custodians of important churches, though they may have a legal right, have no moral right to alter the structure or arrangement of a building in their care without obtaining the opinion and consent of their professional advisers;

(b) that it should be obligatory in all such cases to give public notice of their intentions and sufficient time for any objectors to state their case;

(c) that all church buildings of whatever character should be subject to the supervision of the Central Council for the Care of Churches.

H. L. MANN,
Chairman of the Council.
The Ecclesiological Society.

Architects and Calendars.

TO THE EDITOR OF *The Builder*.

SIR,—It is too late to stop the flood this year, but in view of the necessity for paper economy, would advertisers realise that architects' offices cannot contain more than two or three calendars and that 90 per cent. of those that reach them go straight into the wastepaper basket?

Firms who wish to keep their names before the architects' profession might find alternatives in the small items architects require, such as drawing pins, scales, notebooks and so forth.

THOMAS LAWRENCE DALE.
Lloyds Bank Chambers,
Oxford.

Photo by Hallam Ashley.

NORWICH CATHEDRAL. Stalls in the South range, showing on the extreme right the space where the gap has been made. The elbow-rest on the right is not part of the original range of stalls but has been brought from elsewhere. (See Letter on this page.)

CONVERSION OF HOUSES

LEGISLATION LIKELY

From a Correspondent.

IF Parliamentary time permits, it is understood that the Minister of Health hopes to bring forward legislation for assisting the conversion and adaptation of existing houses. The lines of the new Bill have not been officially announced, but it is expected that Mr. Bevan will follow many of the suggestions put forward to him by a Sub-Committee of the Central Housing Advisory Committee. Mr. Lewis Silkin was the chairman of the committee. After he was appointed Minister of Town and Country Planning, Mr. B. S. Townroe acted as chairman, and presented the report in the autumn of 1945.

The reason for the report being pigeonholed for so long is, no doubt, due to the fact that conversions make heavy demands on certain building materials like timber, and also on skilled labour. According to the report, the proportion of skilled to unskilled labour used in schemes of conversion, as expressed in terms of costs, work out to 71 per cent. skilled to 29 per cent. unskilled.

There are, however, many good reasons why action should be taken to convert vacant or obsolete houses. It is important to convince persons who are urgently in need of shelter either that vacant properties which appear suitable will be quickly made available or that there are good and sufficient reasons why they cannot be used. Further, the requisitioning powers of the Government are likely to be reduced or abolished in the near future. Some alternative will be required. According to the latest figures, to date some 30,000 families have been rehoused in requisitioned homes.

There are obvious technical difficulties in dealing with the conversion of abnormally large and high rooms to working class accommodation. All who have endeavoured to carry out conversions have experienced many obstacles due to restrictive covenants and leases. In any case the cost is so high that local authorities have to be subsidised either from taxes or rents. Private persons can only afford to carry out conversions if they can charge rents sufficient to cover the capital expenditure involved. In short, luxury flats in converted buildings are an economic proposition, but not the provision of working class flats.

Another fact about conversion, not generally realised, is that it means throwing a certain number of families out of houses already overcrowded. In the words of the Report, "the result of works of conversion or adaptation carried out on any reasonable basis, would be to *reduce* rather than increase the amount of available accommodation." No doubt this fact influenced Mr. Bevan not to take any action until the housing shortage became less acute. It has also to be remembered that in any case there will be great difficulty in finding alternative accommodation for tenants displaced while the work is in progress.

We may expect that any new Bill will seek to give further powers to local authorities to undertake such work, probably with the stimulus of a State subsidy, but that little, if anything, will be done to encourage private owners. There are great difficulties in working out a fair basis of subsidy for private individuals because of the varying conditions of ownership, different types of houses involved and the rents likely to be charged.

Accordingly it is probable that the Bill will give the following additional powers to local authorities:—

(1) They will be given power to require owners of unoccupied premises to give full information so as to enable councils to decide whether to take them over or not;

(2) Officials will be given power to gain access to unoccupied premises in order to report on their suitability for conversion;

(3) New powers of rapid acquisition of properties found suitable will be provided; and

(4) Local authorities will be assisted financially to provide alternative accommodation for displaced persons.

It will be obvious that any legislation on these lines will raise many problems, but is unlikely to help private property owners.

THE ROYAL INSTITUTION OF CHARTERED SURVEYORS

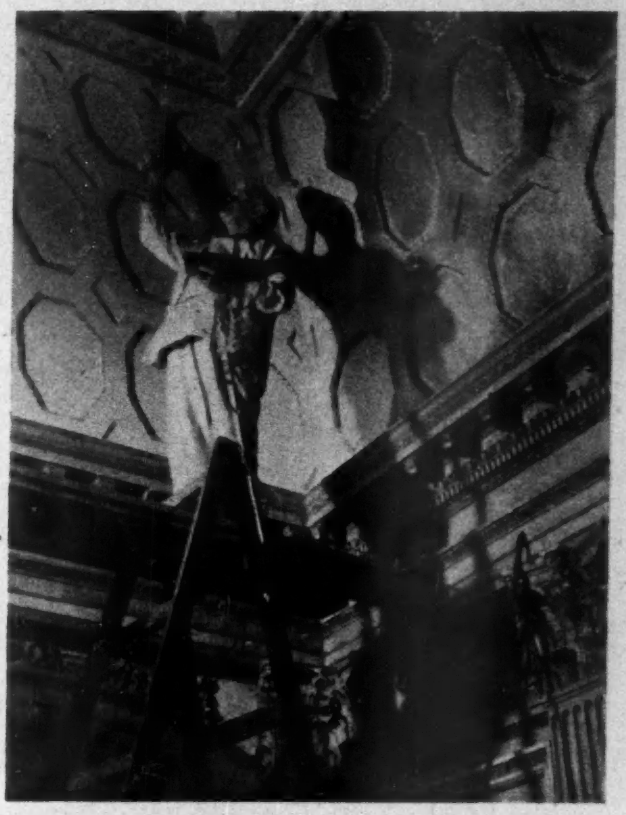
Special (Town Planning) Diploma Examination, 1948

THE following have been successful in this examination, held in June-July, 1948:—Thomas Duncan, c/o County Planning Department, County Hall, Lewes, Sussex; Robert John Hills, c/o Town Hall, Tunbridge Wells, Kent; Arthur James Hunt, c/o County Planning Department, County Hall, Lewes, Sussex.

THE ADMIRALTY BOARDROOM

AT 4.30 a.m. on April 16, 1941, a bomb fell on the old Admiralty Building, in Whitehall, severely damaging the famous Boardroom. This is now being repaired, and the carving and panelling, which were removed to a place of safety after the bomb fell, reinstated, as shown in the accompanying illustrations. The carving and panelling have been attributed to Grinling Gibbons, but without any direct evidence. Gibbons died in 1720, and as the old Admiralty Building was not erected until 1724-26, it is not at all likely that the work, if it is indeed his, was done for this building. One theory is that it was brought from the earlier Admiralty building, and if that is correct it may well be his. What, however, appears to be more likely is that it is the work of one or other of the school of craftsmen who helped him in his lifetime and continued to work in his manner after his death.

The old Admiralty Building, as every well-informed Londoner knows, is the one with the large forecourt, shut off from Whitehall by the Adam screen which was added in 1760. Designed by Thomas Ripley, it has been aptly described by the late Sir Reginald Blomfield as "a somewhat clumsy composition with one ill-proportioned portico." Ripley, a native of Yorkshire, who began his carecr as a carpenter, owed much to the patronage of Sir Robert Walpole, through whose influence he was appointed, in 1721, Chief Carpenter of all His Majesty's Works and Buildings, in succession to Grinling Gibbons. In 1726 he succeeded Vanbrugh as Comptroller of the Board of Works. He was not a great architect, though his Wolterton Hall, Norfolk, was rightly declared by Horace Walpole to be "one of the best houses of its size in England." It was almost certainly through his work at the Admiralty that Ripley met Admiral Boscawen, famous for his victory over the French fleet in the Bay of Lagos. For him he designed Hatchlands Park, Clandon, Surrey, now the residence of Mr. H. S. Goodhart-Rendel, P-P.R.I.B.A., and a property of the National Trust.



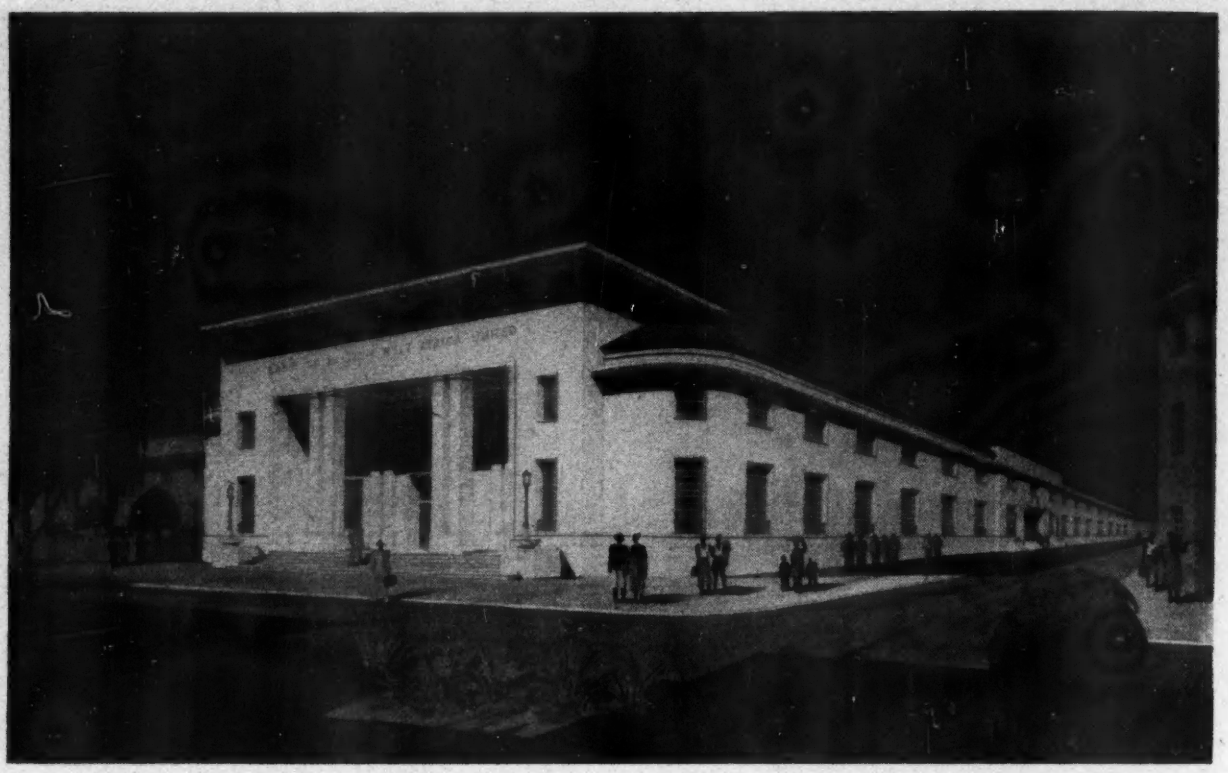
Regilding the enrichment of the coffered coved wall.

Whatever its external failings as architecture, the old Admiralty Building is dignified in its interior treatment. The Boardroom is indeed physical history. It has echoed to the voices and footsteps of many of our greatest sailors—Anson, Hawke, Howe, Hood, Barham, Boscawen, Duncan, St. Vincent, Collingwood, Cornwallis, Nelson, and a host of men of lesser fame. It is a hallowed spot, full of memories of our great naval past and of the men who made it. We do well to conserve it with reverent care.

G. J. H.

A hand-carved panel for one of the walls being examined after renovation, before replacement.

A craftsman at work renovating a hand-carved pilaster cap for the William IV wall.



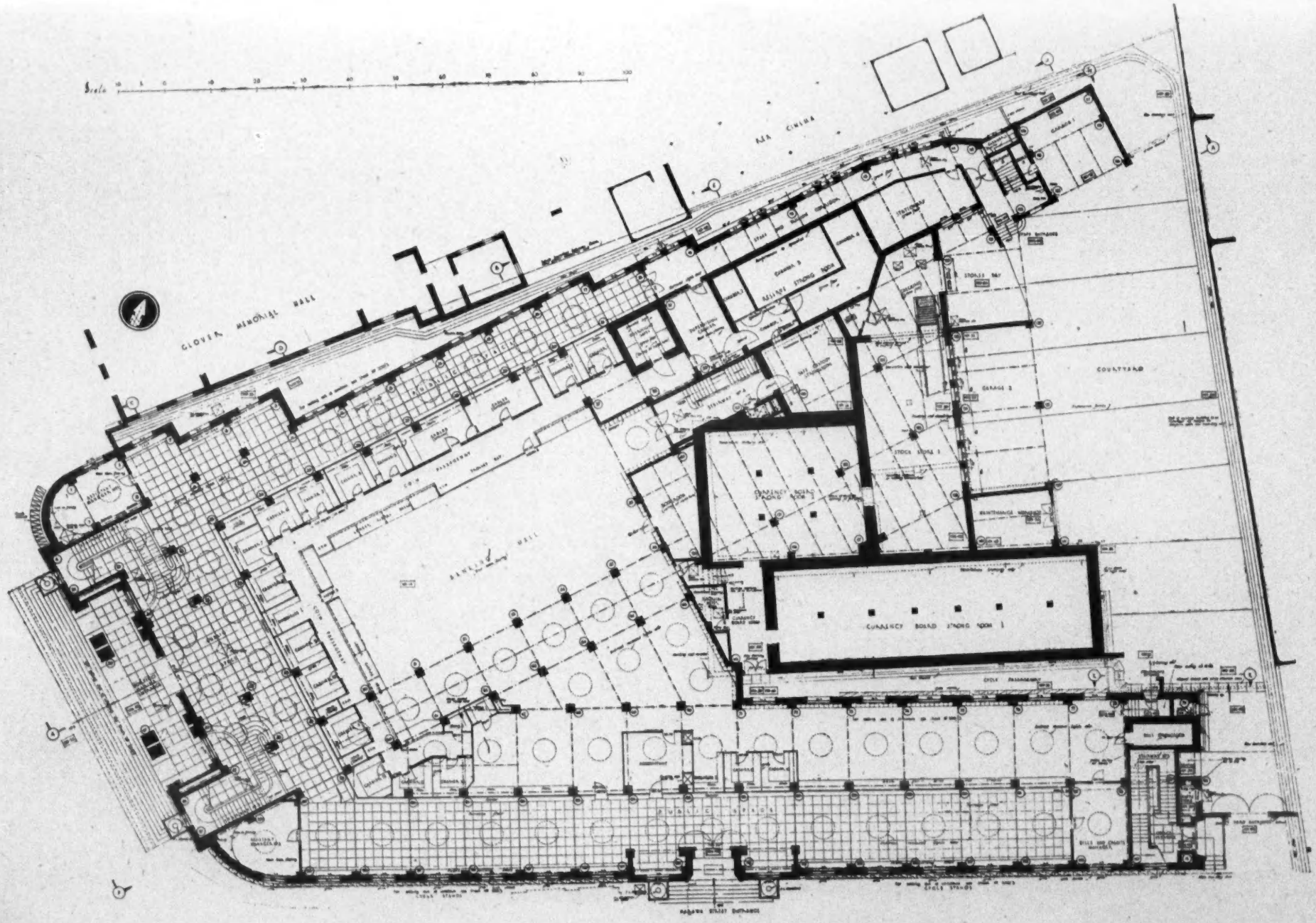
BANK OF BRITISH WEST AFRICA, LAGOS, NIGERIA

RONALD WARD AND PARTNERS, ARCHITECTS

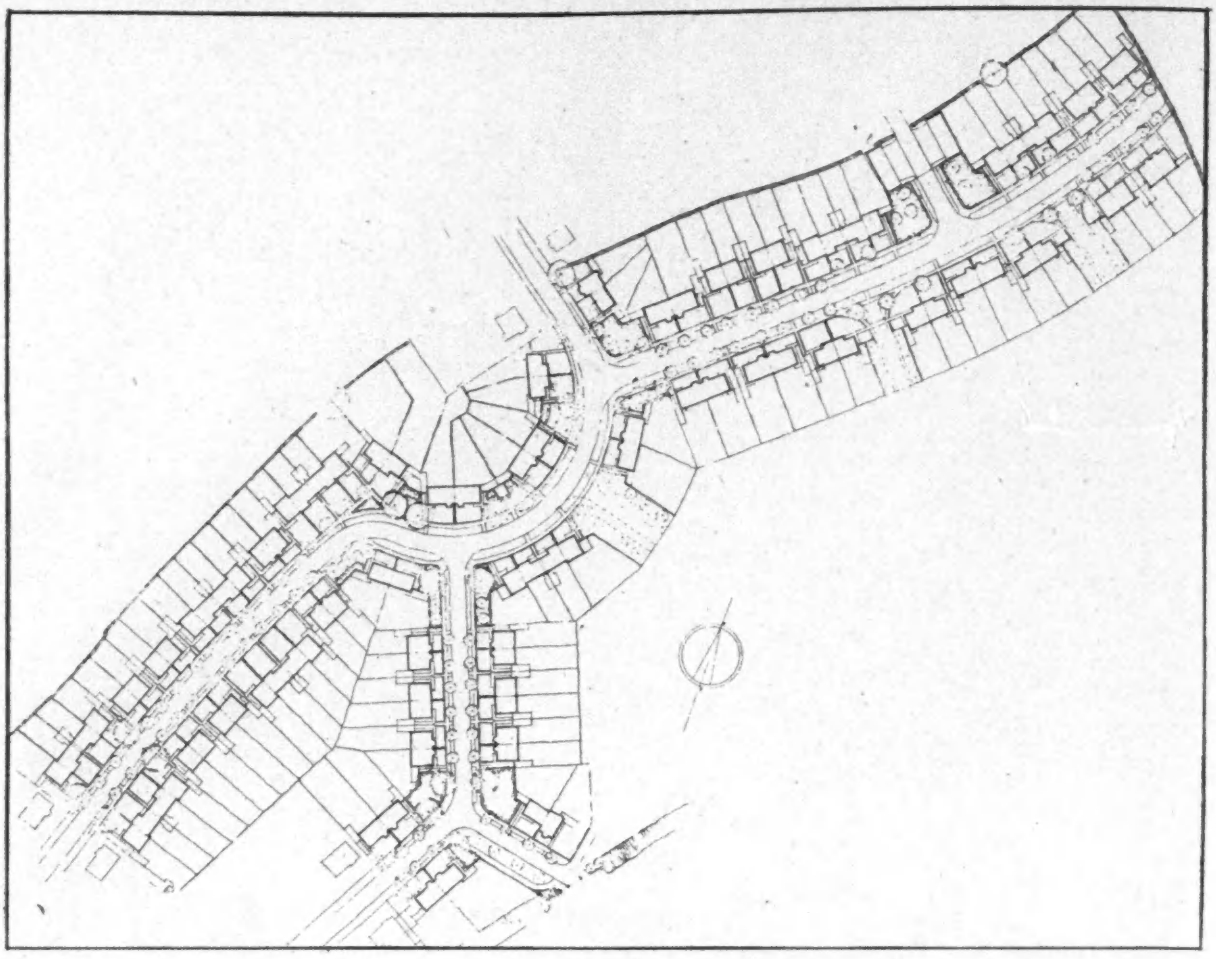
THIS new building is to occupy 75 per cent. of the site of the existing buildings. The design and construction are affected by the necessity to provide a building suitable for the climate, and by the restriction of materials, as far as practicable, to those obtained in Nigeria. Plant and skilled craft labour are also limited.

The building is to be constructed on a foundation of ground beams and framed with reinforced concrete. External walls are of sand and cement blocks rendered on both faces, finished externally with silver-grey Snowcem and spray-painted internally above a terrazzo dado. Ventilation is by means of extraction at ceiling level.

The consulting engineer is Mr. E. J. Cook, and the quantity surveyors A. E. Thornton Firking and Partners.



BANK OF BRITISH WEST AFRICA, LAGOS, NIGERIA: The ground-floor plan.



HOUSING AT BELSWAINS FARM

for Hemel Hempstead Borough Council

LOUIS DE SOISSONS, A.R.A., AND PARTNERS, ARCHITECTS

THIS is the first post-war housing scheme of the Borough of Hemel Hempstead, the second being of similar type, and the third of B.I.S.F. houses. The district is part agricultural and part industrial, and these houses are principally occupied by industrial workers and their families. The builders are Messrs. H. Lacey and Sons (Builders), Ltd., Luton.

SITE CONDITIONS: The estate so far comprises 102 houses, of a total of 170 planned on a hillside site. Adapting the houses to the sloping ground, and arranging the sheds as connecting links, was therefore of more than usual importance. House floor levels were fixed from a preliminary survey, and shed floor levels, paths, ramps and steps then established from spot levels taken as the houses approached completion. Semi-detached pairs predominate because of the nature of the site.

INTERNAL EQUIPMENT: Planned to the recommendations of the Dudley Report and the 1944 Housing Manual, each house has a fully equipped kitchen, a heated linen cupboard and clothes cupboards in all bedrooms. The second w.c. is, in some types, placed with the shed and fuel storage, reached under cover from the kitchen, and in others opens off the hall. All kitchens have electric wash boilers, and all but six have electric cookers. These six have back-to-back grates, one fire providing space heating in the living-room and heat for cooking in the kitchen. Heating for first-floor rooms is provided by warm air from convector fires in the living-rooms and by open grates in some bedrooms. All houses have Sadia UDB electric water heaters.

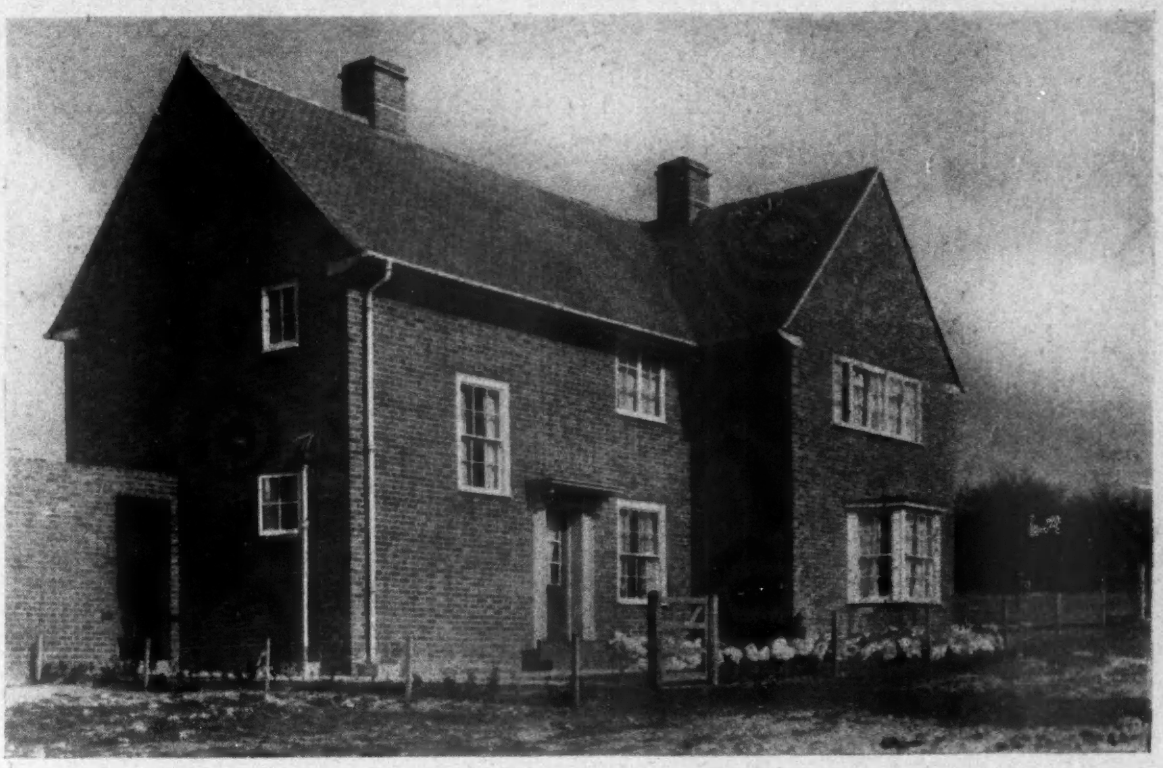
APPEARANCE: Contrasting with near-by pre-war speculative housing with grey roughcast walls and slate roofs, the Belswains Farm houses are built of L.B.C. sandfaced flettons, with roofs of multi-colour concrete plain tiles. The dark, warm colour of walls and roofs is relieved by eaves gutters and downpipes of unpainted asbestos, and Atlas-finished stone dressings to the front doors and coping to the link walls. All windows are painted white, but front and back doors are painted in deep blue, green and purple-brown, the colours being intensified by contrast with the white glazing bars of the doors themselves.

SOUND AND THERMAL INSULATION: Party walls are of 11-in. cavity type. Insulation in the first houses was of glass-wool laid over the ceiling joists, changed to untearable felt under the tiling battens after it was found during the severe winter of 1946 that lagged roof tanks were being frozen because of the lack of windproofing in the roofs.

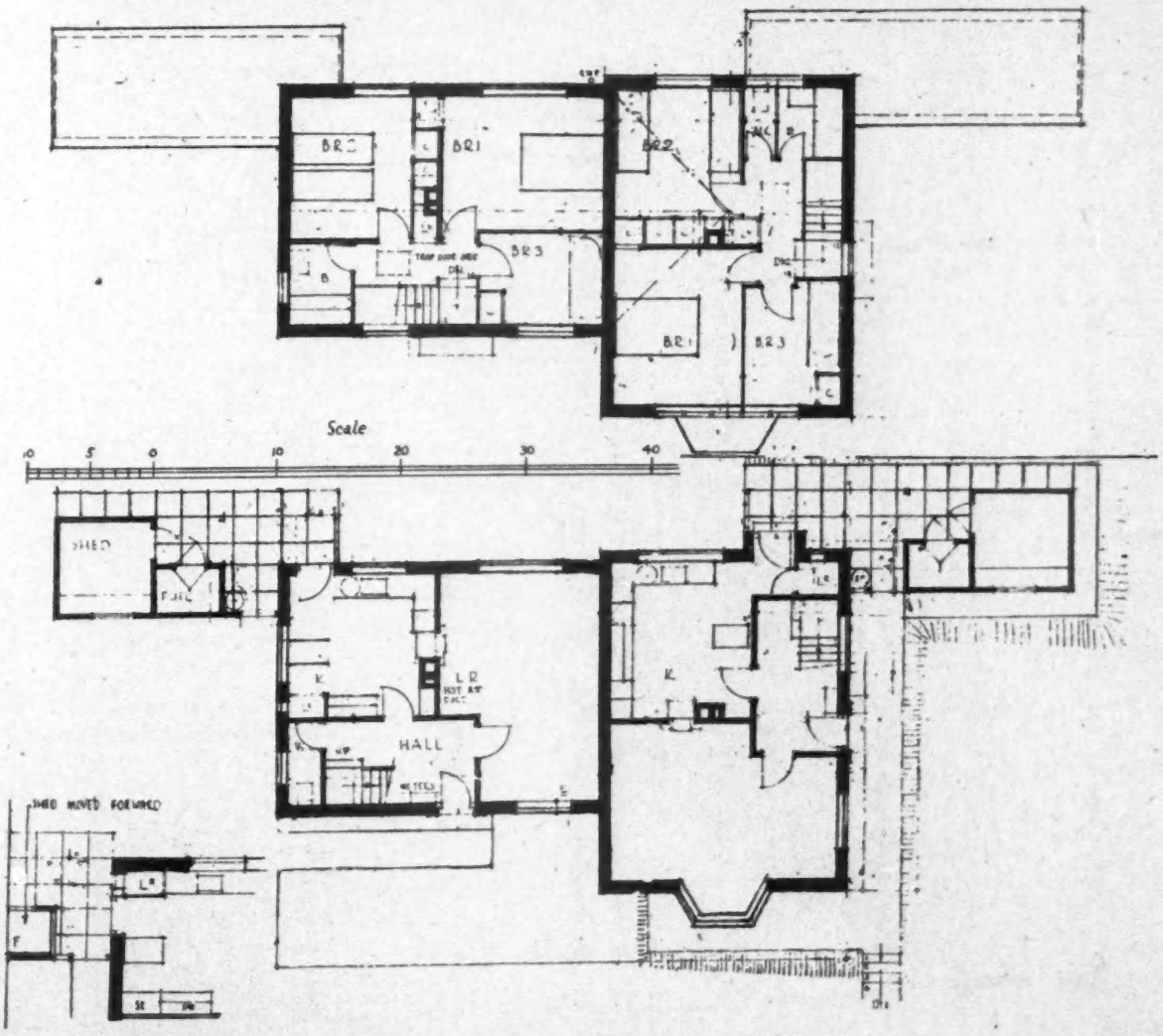
CONSTRUCTION: Having been approved by the Ministry before the limitation of softwood to 1.6 standards per house, these houses are among the last having first floors, skirtings and stair balustrades of normal timber construction, and also timber sashed windows and bays of pre-austerity proportions. *Walls*: External—11-in. cavity sandfaced flettons. Internal—4½-in. brick or 2-in. breeze. Sheds—6-in. rug-faced terra cotta blocks. *Floors*: Ground floor — coloured asphalt throughout. First floor—wood boarding on joists. Staircase—wood. *Roofs*: Normal wood construction, with concrete plain tiles over untearable felt. *Windows*: Kitchen and bathroom windows are casements; all others are sash type, set in the outer 4½ in. of the 11-in. walls. *Doors*: Purpose-made glazed doors for external doors. Internal doors—standard wood panelled. *Internal Finishes*: Walls rendered and set, with washable distemper. Woodwork gloss-painted.

SITE LAYOUT AND PLANTING: A comprehensive scheme of planting was evolved simultaneously with the site development scheme itself. While no form of village green was appropriate, the junctions of roads have been planned with small areas of low planting, which not only provide a measure of contrast to the general density of houses but also maintain safe sight lines at these important points.

COST: The building cost of the 102 houses was estimated in 1945 to be £1,196 16s. per house, or 20s. 6.5d. per foot super. Increases in cost will probably bring the final cost to about 24s. 5d. per foot super.



HOUSING AT HEMEL HEMPSTEAD. A.3 Houses, Types 1 and 1a. *Below*: **The plans.**



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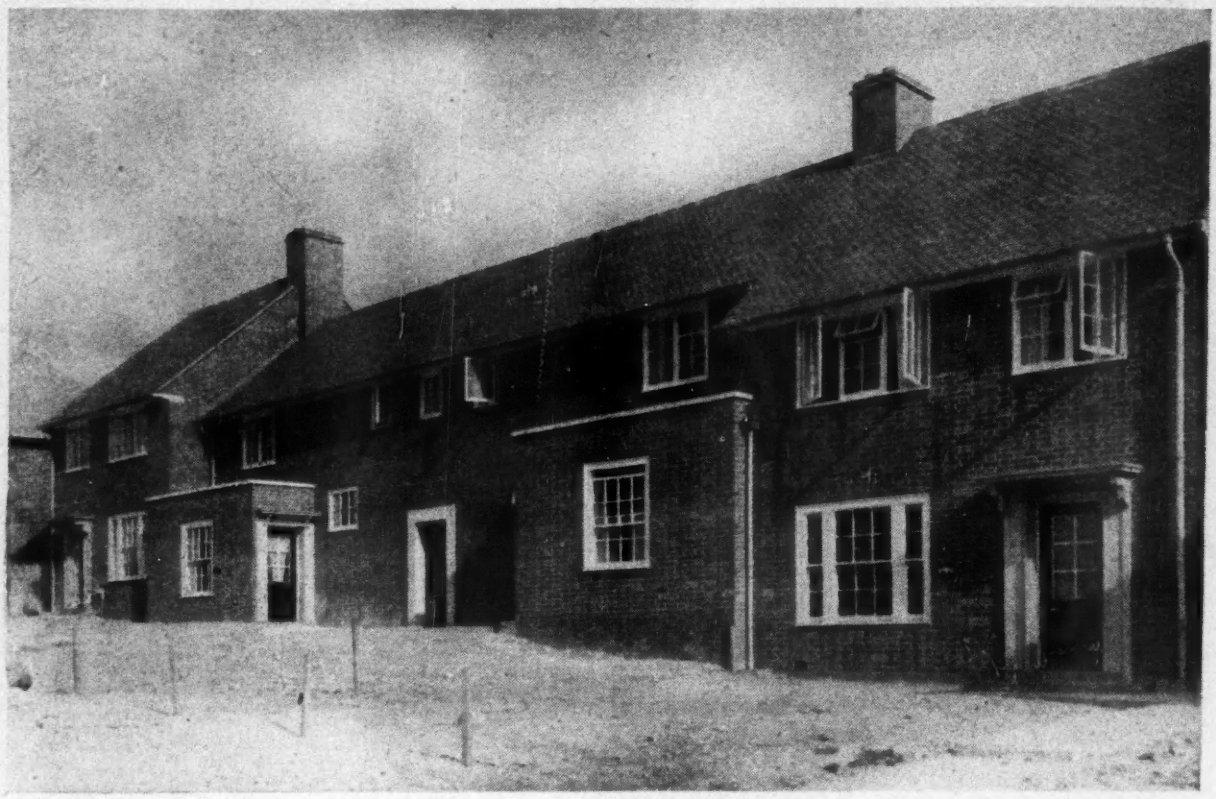
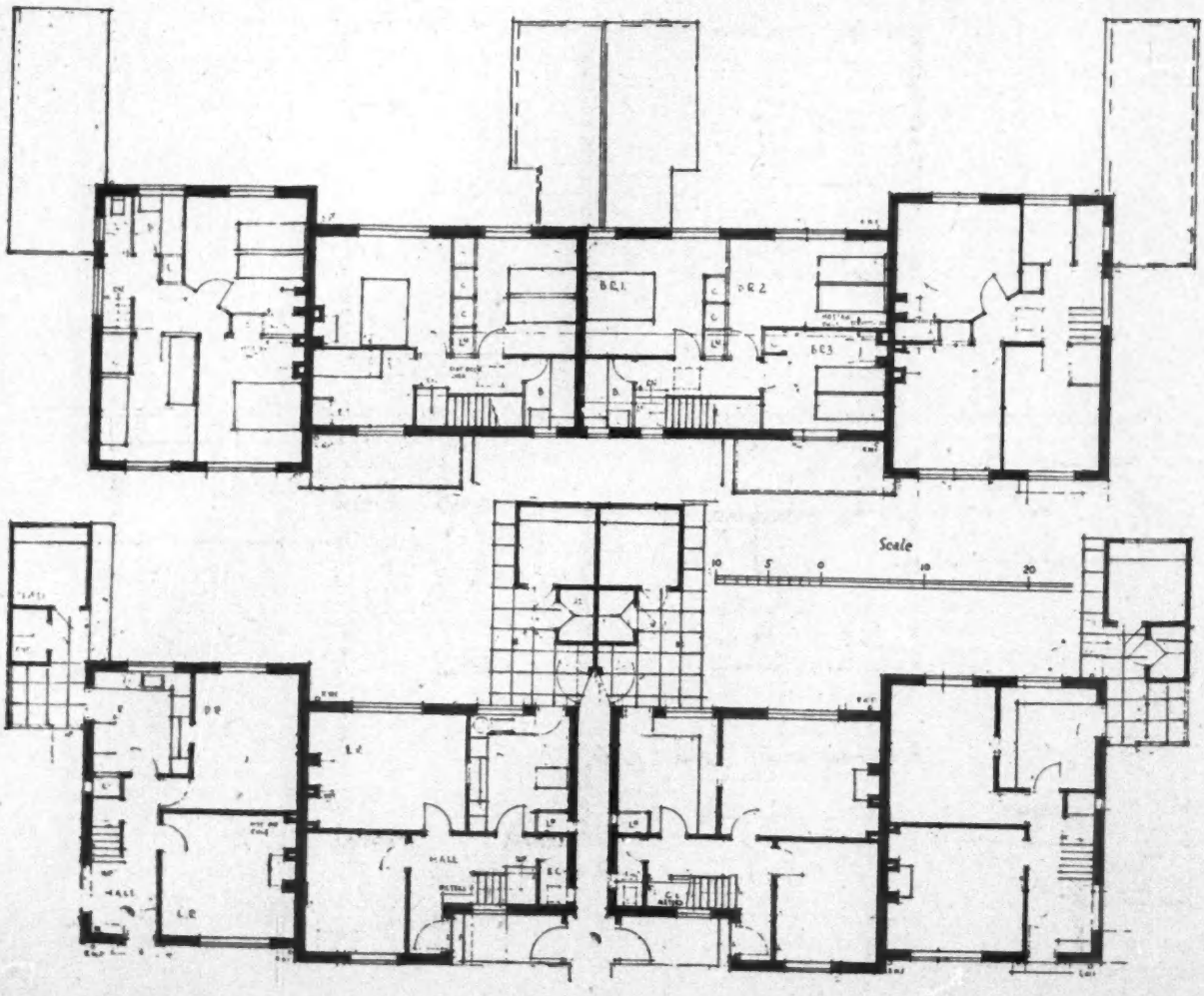
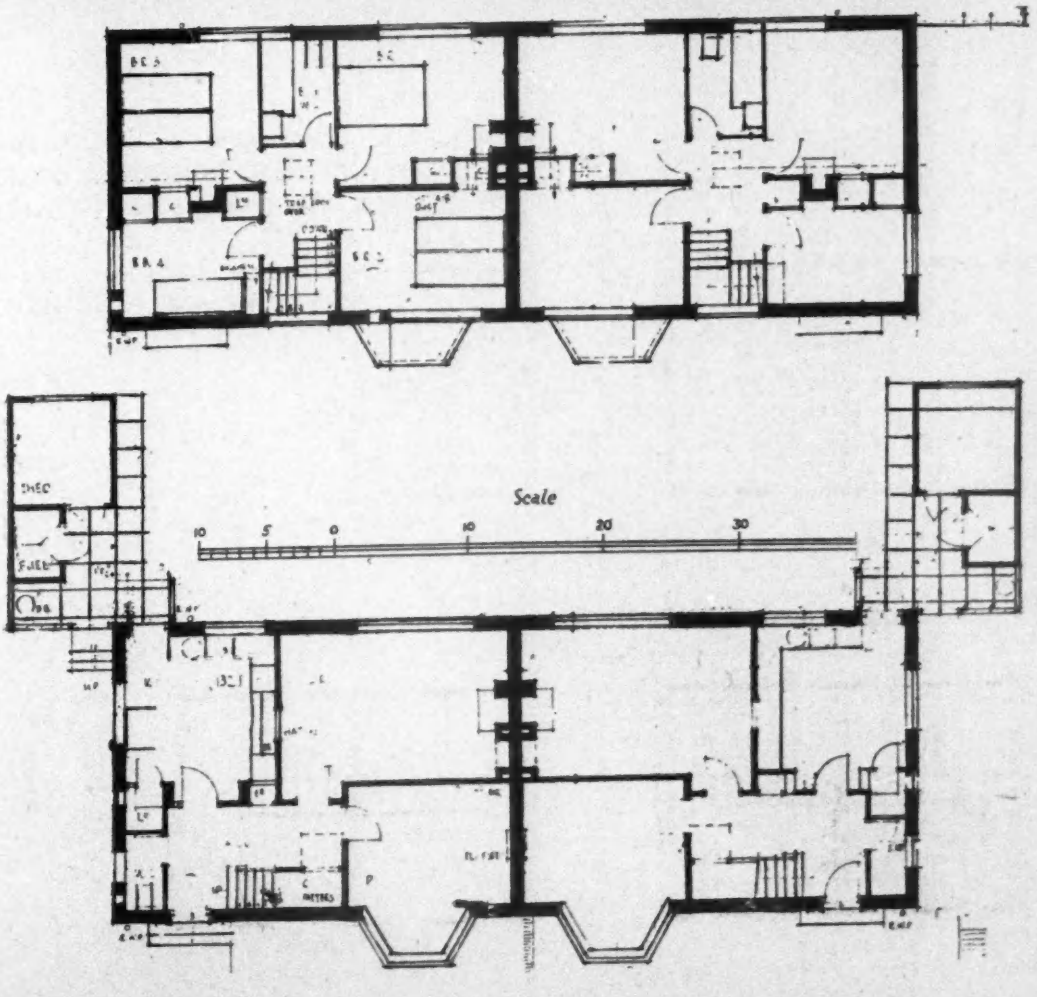


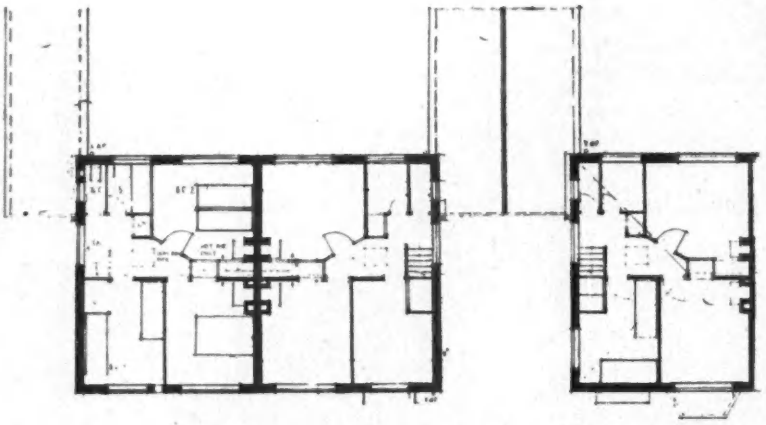
HOUSING AT HEMEL HEMPSTEAD. B.3 Houses, Types 3a, 3b and 5. *Below*: **The plans.**

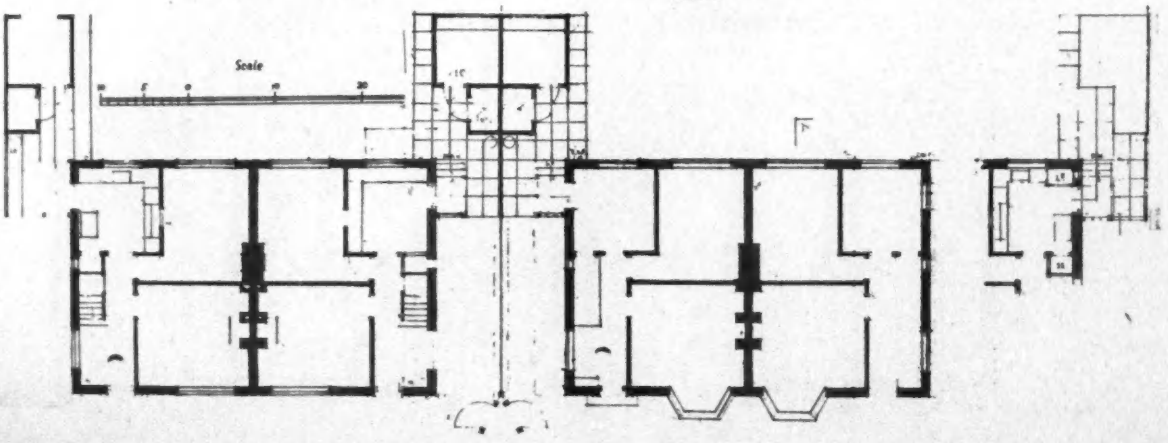


HOUSING AT HEMEL HEMPSTEAD. B.4 Houses, Type 6. *Below*: **The plans.**



HOUSING AT HEMEL HEMPSTEAD. B.3 Houses, Types 5 and 5a. *Below*: **The plans.**





HOUSING AT BELSWAINS FARM, FOR HEMEL HEMPSTEAD BOROUGH COUNCIL

LOUIS de SOISSONS, A.R.A., AND PARTNERS, ARCHITECTS

INDUSTRIAL DESIGN AND ENGINEERING

Paper Read at Royal Society of Arts

THE study of industrial design in relation to the engineering industries leads to the view that design can have no true meaning unless it refers to artistic design and engineering design taken together as one indivisible whole. This opinion was given by MR. M. HARTLAND THOMAS, M.A., F.R.I.B.A., M.S.I.A., in a paper on "Industrial Design and the Engineering Industries," which he read at a meeting of the Royal Society of Arts, at 6-8, John Adam-street, Adelphi, W.C.2, on December 15. Following is a summary of his remarks:—

In examining the many considerations that must influence the work of the designer and his colleagues, it becomes clear that we are going beyond the limits of a single profession. In the industrial scene, management, production, research, welfare and sales organisation each have a definite part to play. From an academic standpoint, besides art and engineering, we must look for help from applied industrial psychology, physiology, sociology, economics—to name only a few. The concept of industrial design begins to take larger shape as the design *of* industry not merely *for* it. I propose to classify engineering industry in regard to the user of the products, rather than to the technologies employed or the trade associations into which industry may be divided. There is rather more affinity between different kinds of products for similar uses than there is between the different uses of similar products. For example, there is more affinity between electric, gas and solid fuel cooking ovens than there is between an electric cooking oven, an electric paint-drying plant and an electric furnace. I would therefore ask you to regard the engineering industries as working for the four broad departments of a design for living, namely, home, work, recreation and transport, including public services. For the home, engineering produces small mechanical equipment such as radio, vacuum cleaners, sewing machines, refrigerators. For use at work, the products are machine tools, agricultural machinery, mining machinery and instruments of production of all kinds. For recreation, there are such things as cinematograph apparatus, the electric hare and totalisators, or broadcasting installations. For transport, we have the vehicles to go by land, sea or air, and the engineering services comprise gas, electricity, water, sewage, telephones and so on.

In engineering for the home, the accent should be upon shelf appeal, cost, and upon simplicity in operation. For work, it should be on productive efficiency first of all, with ease of maintenance a good second. For recreation, the accent would be upon modernity—the latest and most efficient sound recording for the cinema, for example. In engineering for transport, there is a strong accent upon fashion, with speed and the appearance of speed, as the chief components of fashionableness, balanced by economy in operation, particularly in fuel consumption.

Often we are led to say a design is bad, when really the design is very good within the framework of the designer's terms of reference. But the terms of reference can never determine the design automatically: that is a heresy of the extreme functionalistic position which was for a short time adopted by certain critics, although never held by designers. The resulting design must always be a compromise between different design requirements, as they are so frequently mutually exclusive.

The designers' data tend to fall into recognisable groups. First of all, there is the function that the piece of apparatus is required to perform. Then there are considerations of cost. Thirdly, I would put considerations of manufacture and convenience for production.

Considerations of function include not only the machine and its performance but also the relation between the machine and people who are to use it. The operator's point of view is most important in the design of domestic appliances, as in these it is impossible to assume any degree of mechanical talent on the part of a housewife. Simplicity of operation in kitchen equipment has made it possible for women to use a dozen different engineering appliances.

In the case of factory plant, a similar approach is desirable as, if the machinery is designed in relation to simplicity and convenience in use, the factory manager's personnel problems are greatly eased. Design considerations here are identification of controls by shape, position or colour contrast, the correct height of seats above the floor which make considerable difference to the fatigue of the operator, or the dimensioning of machinery to agree with the scope of a person's reach when lifting something of a certain weight, and so on.

Design considerations of these kinds tend rather surprisingly to be regarded as a department of psychology. Very great use was made during the war of the skill of the psychologist in this sense in assisting in the design of weapons and equipment. For example, handles were developed for controls in aircraft that would be instantly identifiable by touch of a heavily gloved hand, although the interior of the aircraft was in darkness. The shapes adopted were a bar set either horizontally or vertically in relation to the pilot, a cross, a D, a hexagon, a C, a diabolo, that is to say, two cones point to point, or an ordinary sphere. One should mention in this connection Sir Charles Goodeve's work for research and development at the Admiralty, much of which is now available to industry, and the current work of Professor Sir Frederic Charles Bartlett at Cambridge University. Professor Bartlett's work at present is particularly concerned with "displays" of instrumentation for the control of apparatus in use by the Services. The technique for the design of such instrumentation is worked out by dint of much experimenting to find out what kinds of visible and audible signals will engage the operator's attention in the manner necessary for a most efficient working of the apparatus. These problems are almost of equal interest to industry as they are to the Services, and there is a strong movement to make the Cambridge work available to industry, and, indeed, to go further, and initiate more work upon industrial instrumentation problems.

To carry the functional considerations a little further, let us examine those affecting machine tool design. This can be taken as a typical example of many others because it partakes to a certain extent of the characteristics, and uses many of the techniques of other branches of engineering, such as electric motors, electronic control devices and optical instruments. It produces capital goods for use in factories, but as we have pointed out, these, like domestic goods, have often to be operated by semi-skilled workers: it can be described as the parent of most of the other engineering industries whose operations depend upon the use of machine tools.

The engineer-designer receives a demand, clearly stated as the result of research, to give practical form to a certain function, such as a machine to drill both sides of a crank case in one operation, or a high-frequency heating appliance. He must break down this demand into components of motion, and the forces and time factors must be calculated. These must again be reduced into terms of obtainable components, many of which are already standardised, and they should be easily replaceable. The current supply position has to be considered and the demands that he is going to make upon the skill of the engineering craftsman. The design must be built up in terms of sub-assemblies and combinations of them, which must be carefully proportioned for the smooth flow of production. The whole design needs to be considered for its demands upon factory space and services to it, such as electric current or compressed air.

Economy of Means.

At some stage in this process considerations of cost must enter in, but it is important not to impose actual costing too early in the design process. If too much costing is added in before the design element is sufficiently developed you will have accident rather than design. On the other hand, the search for economy of means, which is relative costing rather than actual costing, should begin at the earliest stage. This is a stimulant to the designer, who is always in search of what he feels to be an "elegant solution."

The designer should always remember that his product must sell, the minimum requirement being that the profits on sales should cover the cost of the design and research work. The product should be designed so that its convenience and excellence of performance are clear, or even obvious, from its appearance. The engineering manufacturer rarely sells direct to the public and he has first of all to convince an intermediary, who has some technical knowledge of the subject: the influence of this agent is now realised to be very great indeed, particularly in the sector of engineering for the home.

We have so far considered function, cost or economy of means, ease of manufacture and saleability. One must add to these the regard the designer must pay to ease of subsequent maintenance. This is not always in the designer's instructions, for many things are made to be thrown away when they have served their purpose or show signs of wear. It is doubtful whether, with purchasing power greatly extended to many parts of the world now being industrialised, there is likely to be so strong an economic pressure towards design for obsolescence. It is, however, not always disadvantageous. Much industrial equipment has in the past been too solidly made and has lasted too long. The British reputation for quality in industrial products rests very largely upon low running cost and ease of maintenance in preference to low

first cost. The designer would normally prefer it that way and he is often forced by his instructions to lower his standards in favour of competing with other products upon first cost.

The Process of Design.

The question now to examine is how does the designer proceed. What is the objective and what is the process of design? A particular design project would be outlined as serving some consumer need either already established or anticipated in the future. It would be expected to attract custom within a certain price range in specific markets that might exist in more than one part of the world: it should be capable of production by such and such a factory or industrial group, and it is often laid down that the product should exploit the use of a particular range of materials.

The design process consists in assisting these factors. This is first done analytically, giving to each its proper weight; then, secondly, the factors must be collected altogether into a synthesis or integration. This is the essence of the designer's work. Thirdly, the process becomes analytical again when proposed solutions are checked against the data. Some design factors can be established mathematically and when this is possible a mathematical method is commonly employed, but it is very rare in a design project for all the factors to be capable of statement in mathematical terms. Although mathematics can assist in presenting design data and in the after-check of results, it can never provide design solutions. Between the two, the assembly of data and the final check, there is always the leap in the dark: the designer has a "hunch" that such and such a solution would work and he tries it. It is this element that causes the engineering designer to take pleasure in an "elegant" solution.

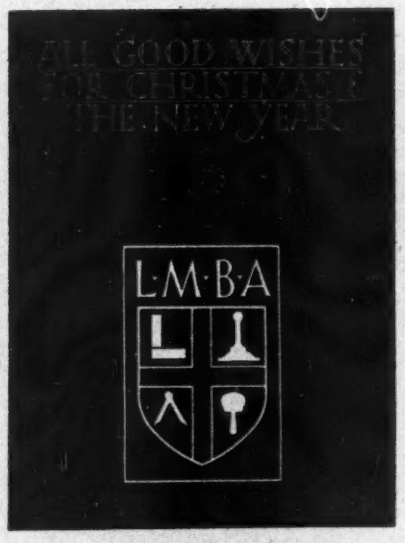
There seems to be no learned or professional body, even in the technological field, that is concerned with whole designs, though perhaps the Illuminating Engineering Society would claim to be such a one. Technical and scientific bodies all appear to deal with isolated techniques that can be repeated as controlled experiments. The engineering student learns to design a valve or a train of gears, but he is not required to design an engine to perform a given task. There is, I believe, no term's work in his curriculum concerned with the synthesis of the information that he has collected. The engineering graduate comes from the university into industry equipped with technical information but with little practice in design. Perhaps this is why five years of apprenticeship is required of him after his degree before admission into the professional institution. But will he get that practice of design in industry—where he is also left to pick up for himself the parallel engineering techniques that are essential for design? It is difficult, of course, to add new subjects to an already overloaded curriculum. What is wanted is a change of attitude in the manner of teaching and then the curricula would take care of themselves.

Management.

Design is a function of management, an aspect of leadership. Management is beginning to emerge as a new self-regarding profession. Management training should have a threefold background in scholarship, in science, and in art. The manager's skill should consist in the creation of a factory environment that is design conscious. Everything in the factory should be done in fine style. Every element should employ the best-known technique. Such a works environment—an industrial culture—is a good thing on its own account and out of it one can expect to receive the best-designed products. The method of creating a comprehensive design policy such as I have been outlining is being much discussed in industrial management at the present time.

It will be asked how the consultant-designer comes into the picture. Normally I suggest that he should be used as a stimulus to the factory's own design staff, rather than as the author of ready-made solutions. The consultant tends to be a person broadly versed in the elements of design, with special knowledge in patches according to his experience of different commissions. It is impossible for him to have the same kind of knowledge of a factory's problems and capabilities as is enjoyed by members of the staff. Conversely, if you open your works to the consultant and treat him as frankly as you would your doctor or your solicitor, and if you insist upon his working closely with your factory staff, you have a good hope that the new ideas that he brings in will be productive of good and saleable designs.

The proposition that I submit is this: The study of industrial design in relation to the engineering industries leads to the view that design can have no true meaning unless it refers to artistic design and engineering design taken together as one indivisible whole. Secondly, that the expression industrial design is devoid of meaning unless it refers to the designing *of* industry at the same time as designing *for* it—industrial design is an industrial process that takes place within industry, not something developed in a studio to be imposed upon industry at irregular intervals. Finally, that, given the first two, industrial design is a function of industrial management and should be incorporated as a positive element into the academic background of research and scholarship that is now being built up to create a setting in which management will henceforth develop as a newly recognised profession.



CHRISTMAS CARD sent by Mr. D. C. Burgess, M.I.O.B., President of the L.M.B.A. It incorporates the Association's badge.

EDUCATIONAL BUILDING IN 1949

A NEW TARGET FIGURE

THE Ministry of Education announced on December 17 that the target for educational building in 1949, fixed in the light of the estimated supply of labour and materials, will be £50-£55 million. Changes in procedure designed to give local education authorities more scope and to simplify the existing machinery for handling building work are also announced, to take effect on January 1.

Twice as big as the 1948 programme, the new programme is designed to meet urgent developments in technical education and the essential minimum needs for places for children of statutory school age arising from new housing and the increase in the birthrate in recent years. Birthrate figures show that between the beginning of 1947 and the end of 1953 the school population of England and Wales will have increased by nearly a million by this cause alone.

The Government regard the strengthening and expansion of technical education as of first importance, and a steep increase in the building programme for this purpose is envisaged from the current level of about £1 million to £15-£20 million in 1952.

Changes in Procedure.

The large building programme will place a great strain on the technical staffs of many local education authorities, and since this strain is likely to increase in subsequent years, the Minister urges them to review their arrangements so that the programmes may be carried out as efficiently as possible. For his part, the Minister has decided to make the following changes with a view to helping authorities:—

(a) for building jobs of £5,000 and over being carried out by local education authorities, no formal submission of plans except for the final plans will be required;

(b) for jobs costing less than £5,000, no formal approval by the headquarters of the Ministry will be necessary except where additions to the teaching accommodation, changes in organisation or the establishment of a new school are involved;

(c) to introduce similar arrangements for school meal projects, except that, since expenditure on this work attracts 100 per cent. grant, authorities will be asked to submit projects of £1,000 and over;

(d) to strengthen the Architects' Branch of the Ministry and to establish within this Branch a small Development Group whose duties will be:—

(i) to investigate educational requirements, particularly in the light of any new developments in teaching technique, and to recommend how these requirements can best be met in terms of architecture;

(ii) by co-operation with manufacturers to influence any new techniques of building so that they may be able to answer adequately up-to-date educational requirements;

(iii) to study the latest scientific information in the light of the needs of educational building;

(iv) to make the results of their studies available to local education authorities and any private architects concerned.

In general, the Minister wishes to encourage more interchange of information about educational building.

BUILDING DENSITY

An address to the Town Planning Institute

IN his address to the Town Planning Institute at their annual general meeting in July, the Minister of Town and Country Planning expressed the hope that planners would re-examine, in the light of the new conception of planning and the increased power of local authorities, the doctrines which had hitherto been accepted. These remarks were discussed by MR. ROWLAND NICHOLAS, C.B.E., B.Sc., M.I.C.E. (M.), when he addressed members of the Institute at the Caxton Hall, Westminster, on December 9. Following is a summary of his remarks:—

We might usefully ask what the new conceptions of planning are. Possibly the biggest change in physical planning has arisen from a growing awareness of the vital necessity to reduce the danger on the roads. This has given us a new conception of road design without building access thereto. Hence the commercial and industrial precinct and the neighbourhood unit. Then, our between-war developments have shown that we failed to provide the sites required for community buildings on a sufficient scale and in the right places. To-day we are attempting to foresee the ultimate likely requirements and reserve sites to satisfy them. Mr. Silkin asks us to look again at the idea of zoning into separate, rigid, water-tight compartments such as residential, non-residential, single family houses and another type of residential division—which includes flats, office accommodation, shops, etc. If it is advantageous that industries should be grouped together, then there alone is a case for industrial zoning; but also if there is no industrial disadvantage in industrial grouping there may still be a case for such zoning, provided that travel to and from work does not become so expensive in time as well as money that it outweighs the improvement in home amenities which arise where workplaces and homes are separated from one another. I do not think there should be any industry in a residential area other than the small bakehouse attached to an individual baker's shop or possibly the repair shop attached to the local petrol station. I see no reason generally why industrial zones should not be located near enough to the residential units so that all other domestic industries can be located therein without inconvenience to anyone. If there are no suitable industrial areas near by, then special domestic industrial zones should be located so that they can conveniently satisfy the needs of three or four neighbourhoods.

One thing that our between-wars development has shown is the great advantages to be gained by residential zoning. But we must reserve areas within which our shops, public houses, churches, health centres and community buildings can be collected, and also leave sufficient spaces for the erection of other buildings which the future population may be later found to require. I do not believe that we know what community centre facilities the present younger generation will require.

Again the Minister referred to reservations for single family houses. Any sub-zoning as may be used for these special types of dwellings in the residential areas will obviously have to be indicative rather than mandatory. Planning must be flexible, and zoning particularly so.

Mr. Silkin would appear to have suggested that shopping zoning prevents the shop being placed near to the consumer. In my mind there are four types of shopping zone, first the town centre or regional zone in which the main shops and stores are located, then the district zone in which for large towns and conurbations these same facilities, on a naturally somewhat reduced scale, are provided within easier reach, thirdly the neighbourhood zone for weekly and mainly consumable needs and the daily wants of people living nearby, and lastly the neighbourhood sub-shopping zone for those daily needs of people who are beyond the normal walking distance from the neighbourhood centre. The neighbourhood sub-shopping zone is intended to contain the shops which will take the place of the inadequate corner shop, which is generally the front room of a converted house.

Next we have heavy industry. I wonder whether the Minister really need have many fears about the location of heavy industry? Undoubtedly, the extent of destruction of amenities can be minimised by thoughtful planning, while the adoption of thermal electric heating stations in such areas would remove one of the most objectionable features—the emission of smoke.

Mr. Silkin is reported to have said that he has never seen any scientific calculation as to what is the right density either for a town or a part of it. Certainly so far as the residential density is concerned I should have thought that more had been written on orientation, distance between dwellings and so on than on any other aspect of planning. Frankly, I distrust scientific calculations when they are to be applied to human needs. Far more would I base my judgment on a careful examination of conditions found in the myriad examples of differing density development which can be found in almost any large town. I am convinced that any overall development at a greater density than from 11 to about 12½ dwellings per acre must include overcrowding somewhere. I would hardly like to agree with the Minister that some plans appear to assume a density obtained by dividing present population by the number of acres of land available for housing, although it might be thought that some plans were based on arbitrarily assumed figures of likely practical overspill.

On the neighbourhood, the Minister asks, in so many words, whether by dividing up population into groups of 10,000 to 20,000 and surrounding them by open spaces, railways and main roads, you will get nice little communities living happily and sociably together. But neighbourhood planning does not depend on people confining even their leisure activities wholly to their own neighbourhood.

Since the time when one or two planning authorities carried out a substantial research to establish the basic standards upon which their planning proposals were to be based, a study group of the Ministry of Town and Country Planning have produced—in the Dudley Report—recommendations on residential planning, while the New Towns Committee have produced their final report on the layout and development of new towns.

If there is a need to review any of these recommendations or to produce other guiding standards covering other aspects of planning, and it may be that the Minister had this matter in mind when making his remarks at the annual general meeting, then I would suggest that an advisory panel of planners might be formed to collaborate with his technical officers for this purpose. An official publication relating only to planning principles and guiding standards would, I feel sure, be welcome in all planning offices.

Discussion.

In the ensuing discussion, MR. S. L. G. BEAUFOY, F.R.I.B.A., of the Ministry of Town and Country Planning, remarked that Mr. Nicholas had given a good answer to the Minister's challenge to planners. But he did not agree with all that the speaker had said. It was of vital importance to keep death off the roads but the change to the concept underlying the new view of planning was deeper even than that. It was the recognition of the change and improvement which were taking place in every field of human endeavour.

Invention and change were taking place with ever-increasing rapidity. Time and distance were losing their significance. The world had shrunk and the possibility of inter-planetary communication was no longer considered beyond the bounds of achievement. We were rapidly being lifted above physical to metaphysical considerations in every field, and amongst all those gigantic changes town and country planning could not remain unaffected. We need not be afraid of change, nor be unready to discard our present concepts.

The fundamental cause of the changes in physical planning was the necessity for greater flexibility within the broad framework of over-riding necessities. The planning scheme of the future must be more a statement of positive inventions and a programme of effort and expenditure. The time element assumed great importance. There would be a long-term concept, but, recognising the ineptitude of human prophecies, planners would give more attention to what it was practicable to carry out in a measurable space of time than to the long-term pictures which had all too often illustrated the limits of man's foresight.

We needed to know what we were planning for, but we also needed to know what resources we were planning with and to remember that we were planning for people and not as an academic exercise. This new concept of physical planning was the essential background to any consideration of planning standards. The Ministry, whose duty it was to lead the way in this matter, was the first to recognise the likelihood of change and welcomed any suggestion for improvement.

Mr. Nicholas had adequately answered the question as to zoning. Nobody wished to be too restrictive, but broad zoning could be justified on every ground. Perhaps he went too far in saying that there should be no industry in a residential area except a bakehouse and car repair shop.

Surveys and research, Mr. Beaufoy thought, could only be justified if they produced results which could be practically applied, but it was unfair to condemn surveys for sometimes unearthing the obvious if at the same time a far greater quantity of essential and useful information was produced. If a survey produced misleading

answers it was not the survey which should be condemned but the methods adopted. Questionnaires were the commonest pitfall. They needed most careful compilation to produce useful answers.

There should not be wholesale condemnation of the corner shop. It did not have to be the front room in a converted house. On the Liverpool housing estates there were delightful examples of useful corner shops and planners should not forget that the vast wastes of low density housing development common to all our large towns created a need for the corner shop.

While he admired Mr. Nicholas for his courageous defence of the standard of 12 houses to the acre, Mr. Beaufoy profoundly disagreed and would ask him if he was satisfied with the results. Contrary to Mr. Nicholas' statement, the origin of 12 houses to the acre was partly concerned with the family vegetable consumption. But good agricultural land had been consumed by this and lower densities.

It was not without a great deal of thought that the Ministry had adopted population-per-acre as the basis of density zoning. Flexibility and opportunities for mixed development simply could not be expressed properly in terms of houses-per-acre. We needed houses for families of various sizes. There was no particular difficulty in transferring population-per-acre back into accommodation-per-acre. That depended on the occupancy rate of the area concerned and the kind of people being catered for. It was not enough to take a national figure of, say, 3.5 and apply it indiscriminately. In other words, the planner's requirement was more thought and less rule of thumb. This was surely an inevitable development in an art such as town and country planning, which was not an exact science.

Consideration of net density alone could be very misleading; gross density gave the truer picture. There might be nothing wrong in putting 200 people on one acre if on adjoining land their requirements for schools, shops, open spaces, and so on, could be provided. It was when high densities were proposed over large areas that the real trouble occurred.

There was no particular virtue in any set population for "neighbourhoods," but the idea of providing community needs in an area of a size which on balance of many considerations gave a good chance of a happy and convenient life seemed good.

After criticising Mr. Nicholas' list of essential shops as inadequate, Mr. Beaufoy went on to say that experience had yet to be gained with central area surveys. It was doubtful whether field surveys would take as long as some people thought. Naturally, adjustments had to be made for modern building standards, requirements for expansion and so on, but that did not invalidate the need for a survey.

Dealing with the suggestion for an official publication relating to planning principles and guiding standards, the speaker said that the Ministry had a series of publications in mind covering the position. Shortages of staff and restrictions on printing might affect the speed at which they could be produced, but the Ministry were doing their best.

The President, MR. JAMES W. R. ADAMS, suggested that all who read the paper should remember that it had been written largely from the point of view of the larger city or conurbation. Some of the principles and standards mentioned would not be acceptable to those planners who were concerned with country towns and villages, although they might be in relation to garden suburbs and larger units. He agreed that it was not the job of the planner to dictate, for example, how many shops there should be in the residential area.

MR. MAX LOCK, A.R.I.B.A., said that too little attention had been given to the proper location of houses based upon existing family structure in clearance areas, and there was a very strong case for relating family structure to what existed, when one knew precisely where people were going. Attention should be given to the proper organisation of survey and research in planning.

MR. B. J. COLLINS expressed the view that streets in residential areas should not be places from which children should be excluded on account of danger from traffic. Houses should not be erected in streets, but in groups. The whole foundation of the residential area should be the convenience and safety of the pedestrian. Cars should be led to the shopping centres somewhere around the back.

LIEUT.-COL H. P. CART DE LAFONTAINE, F.R.I.B.A., suggested that for the purpose of achieving flexibility in standards of housing accommodation from the point of view of numbers of people, terrace houses should be constructed with internal divisions, so that in time they could be subdivided to meet the needs of the people who would eventually occupy them. Some light form of construction could be adopted. The other solution of the problem was grouping in squares, if the squares were big enough.

Replying to the discussion, MR. NICHOLAS said he did not write the paper as an engineer, but as a planner. He was still unrepentant on the subject of survey and research. He had probably carried out as much survey and research work as anybody. He did not think 12 houses to the acre was a low density. He was against calculation of density by population. We must not accept the figures in the Dudley Report as if they were infallible. The figures of the numbers of different types of shops which he had suggested were merely minima. He was sure that as supply and demand came into being other shops would come into an area if the need for them existed.

At Manchester a small section of the central survey had been carried out to see what would happen. It had been calculated that it would take 15 men a year to complete the central survey of Manchester. He could not agree with Mr. Collins about streets. We still had funerals, we still had to collect dustbins and deliver with vans. A tremendous change was taking place in the amount of delivery being undertaken.

OBITUARY

Joshua Clayton, F.R.I.B.A.

The death is reported of Mr. Joshua Clayton, F.R.I.B.A., of Darlington. Since the war Mr. Clayton had done architectural work in connection with the erection of new factories on the Aycliffe Trading Estate, Darlington.

Franklin Kaye Kendall, M.A. F.R.I.B.A.

WE regret to record the death, on November 20, at Rondesbosch, Cape Town, of Mr. Franklin Kaye Kendall, M.A., F.R.I.B.A., aged 79. He was a partner in the firm of F. K. Kendall and Earle.

SITE ORGANISATION

SOME PROBLEMS OUTLINED

"SITE ORGANISATION is a matter on which builders should do some hard thinking so that they can decide how best to overcome some of the difficulties being experienced on almost every building site throughout the country," said MR. H. F. BROUGHTON, of the Chief Scientific Adviser's Division of the Ministry of Works, in a lecture to builders at Birmingham University, on December 1.

Before the war, he said, with an adequate supply of suitable labour and a constant flow of materials, it was not unusual for the organisation of site activities to be left to contractors' agents or general foremen who developed individual arrangements within a broad framework laid down by the management. Under present-day conditions, with difficulties of obtaining sufficient of the right materials at the right time, it was essential that more detailed planning should be done before a job was started, and continued at all stages throughout the contract.

Five factors were involved in achieving efficiency on the site though it was not, of course, practicable to specify one definite and fixed organisation to cover every type and size of job. The geographical position of the contract in relation to the builders' headquarters would also affect each particular problem, but the five essentials to be considered on all jobs were: (1) Site staff requirements; (2) Labour; (3) Materials; (4) Sub-contractors; (5) Plant.

On a well-organised job the cost of supervisory and non-productive site staff might amount to at least 8 per cent. of the weekly wage bill of the productive element on the job. He stressed the importance of finding the right people to carry out the various duties of labour control, labour recording and costing, measuring and bonus surveying, setting out, material ordering and placing, progressing, plant maintenance, time keeping and payment of wages.

The site staff having been selected, it was essential for the unit to work as a team and to be taken into consultation in the preparation and programming of the work. It was suggested that the general foreman should be provided with information based on the estimated labour cost of each item in the Bill of Quantities so that he had a target against which to measure progress, production and actual cost.

Improving Output.

On the question of labour, careful thought before starting an operation could improve the output of a gang. Operations should be related to convenient units such as half or a full working day. An operation which commenced at 8 a.m. and was completed by 3.30 p.m. was usually uneconomic as the next operation was unlikely to be effectively started that day. The remedy was the well-considered disposition of men to be employed on each operation so that either one or two complete operations could be finished in a full working day.

Loss of time due to late starting and early finishing, and to extended meal and tea breaks, were adverse factors which seriously affected production. Provision of proper facilities for meals and a tea service helped here and although such arrangements might need to be subsidised the comparatively small expenditure involved would be worth while. Disorganisation arising from Saturday

morning absenteeism and from wet weather had far-reaching effects, but disturbance from these contingencies would be reduced by careful pre-planning of operations. The use of artificial lighting for inside work during the winter would help to get the job started on time and would enable the work to proceed throughout the whole of the day.

Many difficulties arose from late deliveries of materials. Frequently these seemed unavoidable, but careful attention to progressing of orders, particularly of those items likely to upset the programme, would do much to ease the situation.

Sub-contractors' work must be properly synchronised if the job was to proceed in an orderly fashion.

On the question of plant, Mr. Broughton emphasised that the potentialities of improving organisation and increasing production were extensive. If the machine set the pace the time taken by operations could be more accurately predicted. An example was given of trials with a mechanical concrete-barrow used in concreting two pairs of house foundations. With a gang of seven men, the footings for four houses were completed easily in a 7½-hour day. Twenty-five cubic yards of concrete were mixed and placed in a total of 37½ man-hours. This was equivalent to two-thirds of a cubic yard per man-hour or significantly greater than the output normally obtained to-day. "The use of appropriately designed mechanical plant," concluded Mr. Broughton, "is one of the bases on which the future good site organisation can be built."

A film which showed the application of plant to various types of house construction was shown at the meeting.

S. 1 CLAIMS

CENTRAL LAND BOARD ANNOUNCEMENT

The Central Land Board announce that it will accept a general authority from a claimant, under Part VI of the Town and Country Planning Act, authorising a professional adviser or agent to act for him. The Board recognises that this may be convenient if the same owner proposes to make a number of claims at different times and at different offices of the Board.

This general authority will be accepted subject to the following conditions:—

(a) It should be sent, together with the first claim (form S.1), to the appropriate office of the Board. Specific attention should be drawn to the fact that it is a general authority. The Board will return the authority later with a covering letter bearing the reference number of the claim.

(b) Future claims lodged at the same office of the Board should refer to the general authority and quote the Board's reference number for the first claim.

(c) If subsequent claims are lodged at other offices of the Board the original authority should once more be sent to the Board together with the first claim to be lodged in that particular Region. The further procedure outlined in (a) and (b) above will then follow.

An authority can be accepted for a single claim where it is impossible for any reason (*e.g.*, absence abroad) for the claimant himself to sign. The existing arrangements whereby the Board will accept the signature of agents who are accustomed to act for certain large estates are unaltered.

RECONSTRUCTION IN GERMANY

Problems of the British Zone

The following extracts are taken from an article by Mr. H. Hinchcliffe Davies, A.R.I.B.A., in the July-August issue of "The British Zone Review." Mr. Davies outlines the problems of physical reconstruction and the length of time necessary for its completion.

THERE is no precedent in history that can serve as a guide in calculating the length of time the reconstruction will take. Cities have been obliterated and countrysides have been laid waste in the past by earthquakes, floods, conflagrations and war, but never before have the buildings occupied by so large a population as twenty millions, with a Western standard of living, suffered such devastation. Twenty-five years has often been suggested as a reasonable period for the reconstruction programme. The implications of such a programme can be examined, and its feasibility judged.

The cost of reconstructing the buildings and civil engineering works destroyed or damaged by war in the British Zone is estimated at 22 thousand million Reichsmarks, with an additional 840 million for the debris clearance, at 1939 values and costs. The question of what proportion of the total annual income of the Zone can be spared for reconstruction is not one that can be dealt with in this article; it is altogether too vast a subject. But even if unlimited funds were available there would still be the limitations of coal, raw materials, transport and manpower, and these we can investigate on the basis of present knowledge.

There are many factors that have to be taken into account. There is the debris clearance, which must proceed concurrently with the reconstruction during the initial period. There are the arrears of building existing in 1939 owing to the Nazi concentration on war-building, and the further arrears of new building and maintenance that have accumulated since then. Also there are the additional buildings that are required for the increased population of the Zone, and there is the normal repair and maintenance work and the rebuilding of worn-out buildings that must go on irrespective of the reconstruction. All these requirements will have to be dovetailed together.

Debris clearance is a fairly easy calculation. The quantity to be cleared in the Zone is about 200 million cubic metres. Experience shows that one man can clear on the average a little more than one cubic metre per working day. To move the whole lot in, say, ten years, would require an average labour force of about 70,000 men. If it were all moved by rail it would need 370 fifty-truck trains every working day.

3,700,000 New Dwellings Needed.

Reasonably reliable figures are available for housing. Altogether the pre-war shortage, the dwellings destroyed or damaged, and the new requirements for refugees give a total buildings volume equivalent to about 3,700,000 new dwellings.

There are no reliable figures for the destruction to non-domestic building. Pre-war statistics suggest that about 40 per cent. of the capital value of existing building was domestic and 60 per cent. was non-domestic construction, including civil engineering. Non-domestic construction did not suffer from the war in the same proportion as dwelling accommodation, because most of it was considerably less destructible. It is reasonable to assess the destruction to non-domestic building at about two-thirds of the destruction to housing. When the requirement in industrial, agricultural, public, and other buildings to meet the needs of the increased population is added, the total works out at a building volume equivalent to the construction of about 2,100,000 new dwellings.

Housing and other building requirements together give a total of 5,800,000, which we may call dwelling-unit equivalents. At pre-war rates of output in Germany this volume of building would involve about 8,700,000 man-years of labour; that is, an average force of nearly 350,000 men if the job is to be done in twenty-five years. The requirement for repair and maintenance and the normal day-to-day replacement of worn-out buildings has still to be taken into account.

In most countries of Western Europe normal building and maintenance staff employed in peace-time is on the average one-fortieth of the total population. For the pre-war population and the pre-war buildings of the Zone this would be a little under 500,000, but the figure can be reduced to 400,000 to allow for the 20 per cent. reduction in the number of buildings caused by the war. The requirements will rise gradually, as the work of reconstruction proceeds, until, at the end of the period, it will have risen to 575,000, that is, one-fortieth of the population, assuming that the population is the same in twenty-five years as it is now.

Some allowance must be made for the arrears of maintenance that have accumulated during the last eight years. For the purpose of this study a conservative allowance of 200,000 man-years can be assumed, which, spread over five years, would call for a labour force averaging 40,000 men. All the manpower figures calculated thus far have been average figures. To achieve an average, starting and finishing with comparatively low figures, means a peak much higher than the average. The peaks of the different sections of the programme would, however, dovetail together to a certain extent with one another and with the ascending curve of normal maintenance.

The First Problem.

The first problem, then, is whether or not it is physically possible for the German authorities to transfer from other employment 400,000 men, half of whom —if traditional building methods are to be followed—would need to be skilled. The apprenticeship system serves normally only to replace the annual wastage (about 5 per cent.) in craftsmen and thus to maintain the strength of the industry. It could not be geared up to produce three or four times as many and in any case would be too slow. For the purpose of reconstruction a rapid increase of strength would additionally be required; it might be achieved by special training, say, an intensive six months' course in a building school followed by eighteen months' practical work with a builder. To turn out 200,000 trainees in five years would call for the establishment, staffing and equipping, before the start of the five years, of about 120 schools, each for 250 men. It is not impossible, but it is highly improbable that

this could be done quickly enough to reach the target.

Even supposing the building labour force could be expanded at the rate, and to the size required, there is still the problem whether the Zone could afford to have so many men employed on building. Building is essentially an industry of able-bodied males. Before the war the proportion was one building worker to approximately ten other manual workers. Under present conditions a force of 900,000 building workers would mean a ratio of one building worker to about five others, since the proportion of able-bodied males to total population in this Zone is considerably lower than in pre-war days. It is a fairly reasonable conclusion that the Zone could not afford to have one in six of its fittest men employed on building.

The question of the probable availability of materials can also be examined. Broadly speaking, a force of 900,000 building workers would use 80 per cent. more material than a force of 500,000. In normal times the average building worker used three times as much building material as he did in 1947, because his output was three times as great. If it is assumed that the 900,000 building workers will achieve the pre-war output rate, they will use five times the materials that were used in 1947, and that means, so far as what are known as the stones-and-earths materials are concerned, that the building material factories will need five times as much coal as they were allocated in 1947.

Before the war the annual consumption of sawn timber in building work in the British Zone was probably about 5½ million cubic metres. For a twenty-five-year reconstruction programme about 9 million cubic metres per annum would be required. The present total annual production of sawn timber in the Zone is reported to be rather less than two million for all purposes; since the forests are diminishing it is unlikely that production will be increased. Most of the nine million would therefore need to be imported from other zones or from abroad. At present all Western Europe is suffering from a shortage of timber.

Calculations of requirements in constructional steel, builders' equipment, hardware, wood pulp for roofing felt and the other essentials for building all result in similar answers; nearly twice the pre-war quantities to be provided out of depleted indigenous resources or by import.

The transport prospects are equally depressing. In peace-time nearly one-sixth of all the goods carried by the railways were materials for building. The rail transport requirements for the peak of the twenty-five year reconstruction programme work out at about 36 million tons a year, apart from debris clearance, which may involve anything up to 18 million tons per annum. For comparison, last year the total quantity of all goods carried by the railways of the Zone was 98 million tons.

It would seem, then, that the requirements of a twenty-five year reconstruction programme, in terms of manpower, materials and transport, are greater than the Zone is likely to be able to meet. It is true that materials might be imported if there were enough exports to pay for them; the transport system might also be built up, by the import of rolling stock, to cope with the increased demand: but there does not seem to be the least likelihood that the labour requirements could be met from zonal sources.

The calculations leading to this conclusion have been based on pre-war rates of output and pre-war constructional methods. It is not impossible that new materials and new techniques may bring about a substantial reduction in the coal, timber, transport and manpower requirements of building, but it would need to be a very substantial reduction indeed to enable the job to be done in a quarter of a century.

Building Research.

Building research has not been neglected in Germany, and new processes have been evolved which are claimed to effect substantial economies in man-hours and in the key materials, but so far nothing has emerged that seems likely to effect the complete revolution in building technique that the reconstruction problems of Germany demand.

The solution may be found not in one single invention but rather in the combination of many separate devices and substitutes. All the inventions of scientists and technicians will be fruitless unless the building industry is prepared to forsake its traditional conservatism and to learn new methods and the use of new materials. This applies equally to the architects; they must learn to design the new buildings, to take advantage of the new building techniques, and of mass-production.

IN PARLIAMENT

Building Materials.

MR. ELWYN JONES asked the Minister of Works what had been the result of his discussions with representatives of the manufacturers and distributors of building materials and components about the report of Lord Simon of Wythenshawe's Committee of Enquiry into the organisation and distribution of building materials and components; and whether the Government would now implement the committee's recommendation for immediate action by the Government to control distributors' margins on materials and components.

MR. KEY said that since engaging in the discussions referred to in the first part of the question, he had been notified of reductions in the prices of a number of materials and components. In reply to the second half of the question, control was being exercised over margins in a number of the more important cases by the fixing of maximum prices to the user and in other cases by the operation of the Goods and Services (Price Control) Orders.

Rural Housing.

MR. GRANVILLE asked the Minister of Health if, in order to secure the maximum labour force for agriculture, he would review the position regarding the building of agricultural workers' cottages by rural authorities, including the formation of Agricultural Housing Associations for the purpose of supplying cottages on the same basis as in the mining areas.

MR. BEVAN said that rural authorities were already building all the houses possible within the resources available. It was open to a local authority to include arrangements made by their authority, rural or urban, with a Housing Association under Section 94 of the Housing Act, 1936.

Housing Licences.

MR. ORR-EWING asked the Minister of Health whether, in view of the urgent necessity for increasing the tempo and reducing the cost of house-building, he would revise the arrangements in circular 108/48, which forbade the issue of licences to private builders otherwise than single licences for single houses or pairs of semi-detached houses for specific occupiers.

MR. BEVAN said that these arrangements were made to ensure that each licence was related to a particular building. There was no objection to applications being made for a series of licences.

Petrol for Surveyors.

SIR WAVELL WAKEFIELD asked the Minister of Fuel and Power if he was aware of the increased mileage which surveyors and valuers had to travel in view of the provisions of the Town and Country Planning Act; and would he ensure that adequate petrol was granted to them to carry out their work, in view of the short time remaining for the necessary work to be done for the carrying out of the Town and Country Planning Act.

MR. GAITSKELL said that the answer to both parts of the question was "Yes, sir."

Steel-Framed Buildings.

MR. ERROLL asked the Minister of Works how many steel-framed buildings were under construction in London; what was the approximate total accommodation which would be so provided; and how these figures compared with those for steel-framed Government offices now under construction.

MR. KEY said that six steel-framed buildings licensed by his Department were at present under construction in London for use as private offices. The total area of office space provided would be about 146,000 sq. ft. This compared with eleven steel-framed buildings providing about 1,340,000 sq. ft. of office space at present under construction for Government use.

MR. ERROLL: Is it not a disgrace that far more Government building is going on in London at present than for private purposes?

MR. KEY: No, sir, because the amount being provided for Government purposes will release a much larger amount more than is provided by private accommodation under requisition.

MR. LANGFORD HOLT: Does the Minister intend to convey by his answer that the Government are wasting space at the moment?

MR. KEY: No. I do not think the answer would convey that to anyone who knows the type of buildings that are in use. We have had to requisition buildings not suitably adapted for the purpose in order that the job might be done.

Working Party Report.

MR. KEY, replying to Mr. Marples, said he could not at present forecast when the Working Party would report.

Requisitioning Powers.

SIR JOHN MELLOR asked the Minister of Health whether he had now considered the observations of Mr. Justice Streatfeild, on November 19, in the King's Bench Division, with regard to his circulars, which purported to sub-delegate requisitioning powers, and criticising them as unintelligible and inaccessible to those whose rights were affected; and if he had any statement to make.

MR. EDWARDS, who replied, said that the circulars in question were not renewed after June 30, 1948, but were replaced by a procedure under which the conditions were expressed more clearly and the terms of delegation were brought to the notice of the owner in each case.

COLOUR AND LIGHTING IN FACTORIES

THREE-DAY COURSE AT R.I.B.A.

THE course on colour and lighting in factories and on machines, held on November 24-26 at the R.I.B.A., emphasised the need for efficient and congenial surroundings in factories, and brought out the conclusion that their provision should be directed by a team consisting of designers, scientists and technologists. It was clear that although much scientific work had already been done to avoid costly trial and error, there was still not enough liaison between the experts. This might largely be due to a lack of awareness of the precise functions of the various experts or even of their existence.

The course was organised jointly by the Council of Industrial Design and the British Colour Council, with the co-operation of the Building Research Station of the D.S.I.R., and the Paint Research Station of the Research Association of British Paint, Colour and Varnish Manufacturers.

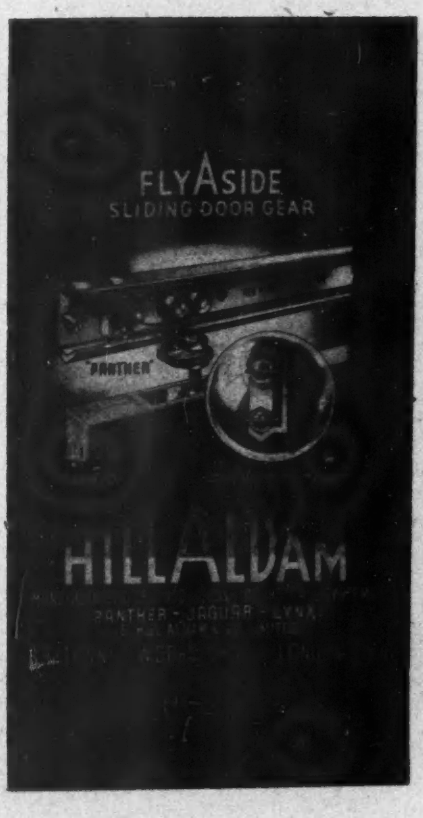
At the introductory session, MR. MARK HARTLAND THOMAS, M.A., F.R.I.B.A., M.S.I.A., chief industrial officer to the Council of Industrial Design, said that the Council's work in connection with the design of products, including machine tools, had led inevitably to an interest in the design of factories and factory interiors. The design of the factory environment was bound up with the design of the goods being produced, since design policy ran through the whole factory and its products. Many manufacturers had approached both the Council of Industrial Design and the British Colour Council for assistance in this matter, and it had been found that there was little co-ordination between the many specialists concerned. The purpose of the conference was to bring all these people together for their mutual information and for the information of architects, designers, engineers, personnel managers, and others.

MR. ROBERT F. WILSON, Art Director of the British Colour Council, referred to the need to make the existing mass of research and information generally available. He stressed the importance of surroundings and lighting to industrial efficiency.

Speakers, representing a cross-section of the team concerned with the practical solution of these problems, read papers, many of them illustrated with slides, films and other visual exhibits.

Among the papers read during the course were the following:—"Environmental Factors in Relation to Absenteeism," by Dr. T. M. Ling, M.D., M.R.C.P., medical director of Roffey Park Rehabilitation Centre; "Fundamentals of Colour Vision," by Dr. W. D. Wright, D.Sc., Ph.D., reader in colour vision at the Imperial College of Science; "The Development of a Colour Treatment," by Mr. W. A. Allen, B.Arch., A.R.I.B.A., a principal scientific officer, Building Research Station; "Practical Application," by Mr. D. L. Medd, A.R.I.B.A., Architects' Department, Hertford County Council; "Basic Colour Terminology and the Role of the Technician," by Mr. H. D. Murray, M.A., F.R.I.C, F.R.P.S.; "Brightness, Contrast and Glare," by Mr. R. G. Hopkinson, B.Sc. (Eng.), Ph.D., F.I.E.S., a principal scientific officer of the Building Research Station; "Other Aspects of the Lighting Problem," by Mr. E. B. Sawyer, F.I.E.S., of the Lighting Service Bureau; "The Function and Use of Colour," by Mr. R. F. Wilson; "Colour and Lighting on Machinery," by Mr. H. Grimshaw; and "The Chemical and Physical Properties of Paint," by Mr. P. J. Gay, B.Sc., Paint Research Station. The chairmen of the various sessions were the Rt. Hon. Lord Marley, D.S.C., J.P., D.L., chairman of Parliamentary Sub-committee on Industrial Efficiency, Sir Charles Tennyson, C.M.G., member of the Council of Industrial Design, Mr. R. O. Ackerley, M.I.E.E., F.I.E.S., chairman of the Utilisation Section of the Institution of Electrical Engineers, past-president of the Illuminating Engineering Society, Mr. G. P. Barnett, chief inspector of factories for the Ministry of Labour, Mr. W. A. Rutter, O.B.E., F.R.I.B.A., chief architect of the Ministry of Works.

The course closed with a "brains trust" with Mr. Basil Marriott, of the Council of Industrial Design staff, as question master. Here the speakers were able to supplement or explain the salient points of the papers. There were approximately 180 people at the course; the largest groups were architects, colour consultants and paint manufacturers. The course was wide enough in its scope to be of interest also to the personnel managers, engineers and others who attended. The aim of the course was to break down the watertight compartments in which specialised work and research have hitherto tended to be done, and to relate the various lines of approach. As well as providing the means of effecting this liaison, it may well have laid the foundations of a concerted advance towards the rapid development and general acceptance of a highly specialised and necessary contemporary technique. In order to provide a record of the course, a report of the papers will be prepared and will be supplemented by an international bibliography of the literature and references, prepared by the Design Intelligence Section of the Council of Industrial Design.



BOOK REVIEWS

THE MODERN FLAT. By F. R. S. Yorke and Frederick Gibberd. (2nd edition.) Pp. 207, illustrated. (The Architectural Press, Ltd.) 35s. net.

The first edition of this finely printed and well illustrated book appeared in 1937 and was deservedly successful. Though the selection of examples is confined mainly to the advanced school of design, the choice is nevertheless discriminating, and the information furnished by text and plans is thoroughly practical and up-to-date. More than a quarter of the plates depict English examples, most of them being of reinforced concrete construction or framing. A few are in brickwork. This edition contains very few changes in the text beyond a reference to "mixed development," with some examples of that recent trend; but there are several new inset photographs of examples from England and abroad. The 149 plates of flats, which constitute the bulk of the book, contain five new English examples by Messrs. Yorke and Korn, Lubetkin and Tecton, Wells Coates, Maxwell Fry and Edward Armstrong; and new foreign examples from Argentina, Czechoslovakia, France, Holland, Hungary, Italy, South Africa, Sweden, and the United States. Some of these replace illustrations in the first edition; some are additions. At the end of the volume are 14 plates illustrating large schemes of flat-design which have not yet achieved realisation. The first of these, by Messrs. Yorke and Breuer, is a competition-design for a whole city; the second is M. Corbusier's "La Ville Radieuse." This volume will appeal to the laymen as well as architects. Some of its photographs are superb.

A HISTORY OF CAST IRON IN ARCHITECTURE. By John Gloag and Derek Bridgwater. Pp. xx, 395, illustrated. (Geo. Allen and Unwin, Ltd.) 63s. net.

This subject does not appear very promising at first sight, but the magnificent book is the result of thorough research. Due attention is given to the fine Sussex firebacks of the 17th and 18th centuries, most of the examples chosen being from the Victoria and Albert Museum. A series of early bridges is illustrated in detail, beginning with the famous example at Coalbrookdale, designed by an architect in 1770. Then comes a large selection of Regency specimens, mainly railings and balconies, including 15 pages from Cottingham's *Smith's and Founder's Director*, first published in 1823. These designs are scholarly and classical, mainly Greek in inspiration. The finest example is a lovely balustrade of vine-leaf form from the De Grey Rooms at York.

The next phase referred to includes the iron bridges designed by Robert Stephenson for the London and Birmingham Railway in early-Victorian times, and there are several reproductions from Bourne's charming lithographs. Almost contemporary with these are two familiar and successful examples: the Crystal Palace, and the Palm House at Kew. The works in cast iron produced between 1851 and 1900 are best forgotten, but in the present century there has been a realisation of the possibilities of the material. Examples of its proper use include some bridges from Cardiff, Sir Giles Scott's standard telephone-kiosk, some shelters, the excellent façade of Lothian House, Edinburgh, by Mr. Stewart Kaye, and various office-buildings in Shanghai and Calcutta.

M. S. B.

ELEMENTS OF QUANTITY SURVEYING. By Arthur J. Willis, F.R.I.C.S. 4th Edition. (London: Crosby Lockwood and Son, Ltd.) 15s. net.

MORE ADVANCED QUANTITY SURVEYING. By Arthur J. Willis, F.R.I.C.S. 4th Edition. (Idem.) 30s. net. (Separate Portfolio of Plates.)

The republication of these two works, with the revisions that were necessary to comply with the 1948 edition of the Standard Method of Measurement, will have been awaited with equal eagerness by quantity surveying students, to whom Mr. Willis's reputation seems to be approaching the level of the immortal Cocker, as by those in practice who value his treatises as an unfailing stand-by when faced with a poser or the need for a refresher. Mr. Willis was editor of the recent 4th edition of the Standard Method of Measurement, and so should know what he is talking about. It is one thing, however, to know all the answers and another thing to be able to convey them to the reader. Mr. Willis does this with distinction. The student will absorb sound advice and sure technique from the "Elements," and the final examinee will find all he requires in the "More Advanced." Indeed, there is scarcely a difficult problem in the whole range of quantity surveying that is not touched upon in this pair of volumes, or in the admirable portfolio of 15 scale drawn plates which accompanies the senior work. S. H.

CASTLE BEDON. By Charles Lowrie. Pp. 155. (Ward, Lock and Co., Ltd.) 8s. 6d. net.

It is unusual for a novel to be reviewed in our pages, but Mr. Lowrie's story has a special interest for all concerned with architecture and building. It is primarily a very able study of building in the Middle Ages. The scene is laid in East Anglia in the 14th century. "Castle Bedon" lies in the western part of Norfolk, and may well represent Castle Acre, while "Pentham Abbey" may be Pentney, where there is a ruined Augustinian priory. The principal characters are fictitious but halfway through the story the scene changes to Ely, where historical characters, such as Alan of Walsingham, John of Wisbech, and Prior Crauden, are introduced. There is an enthralling account of the erection of the great timber lantern of the cathedral. The author is well versed in the technicalities of building as well as in details of medieval life, and gives a vivid picture of existence in monastery, cathedral and castle during the forty years or so before the Black Death. His two chief characters are laymen with scant respect for the Church which employs them, and no credit is awarded to clerics for designing or erecting buildings. Thus the author follows the now accepted theory that architects and craftsmen at that period were all laymen, not monks, and he has much to say of the power of the craft guilds. In his view, plans, sketches, details and models were all used freely, and towers often collapsed when skilled architects were not consulted. More daring is his invention of a tempestuous, but talented, woman architect, the heroine of the story, whose final achievement was to produce the first "Perpendicular" design, just after the Black Death!

MODELLED ARCHITECTURE. By P. R. Wickham. Pp. 161, illustrated. (Percival Marshall and Co., Ltd.) 12s. 6d. net.

The author states in his preface that he has tried to produce, perhaps for the first time, something approaching a complete textbook of architectural model-making. In fact, several other recent manuals are available, as well as a special number of the American journal *Pencil Points*. The number of people interested in this subject has greatly increased of late, partly owing to the growing use of models for new towns and other large building schemes, and partly to the popularity of model-making in the curricula of many architectural schools. The kind of model which evidently interests Mr. Wickham most is the "period building." He is an enthusiast for "olde" England as well as a skilled craftsman, and tells us how to reproduce in miniature the texture of ancient brickwork, the sag of timber roofs, and, in fact, almost every detail of our historical buildings, with the aid of cardboard, plywood, building board, Perspex, plastic wood, "Pyruma" cement, parcel tape, "tube glues," and ready-printed "brick-papers" showing appropriate bonding. His advice on tools, materials, and methods of model-making applies equally to modern subjects and shows great ingenuity. The text is easy to follow in conjunction with the numerous drawings, though the lettering on these drawings will not please fastidious critics.

NEW WAYS OF BUILDING. Edited by Eric de Maré, A.R.I.B.A. Pp. 235, illustrated. (The Architectural Press.) 30s. net.

This is a composite work by six writers, of whom three are civil engineers and two are architects. It covers most, but not all, of the materials in general use in building to-day, and each section concludes with a bibliography. Some of the bibliographies are very comprehensive; e.g. that concerned with concrete comprises 112 items including articles in the British and foreign technical Press as well as books and official pamphlets, whereas the chapter on brickwork has only six references. The editor, in his foreword, notes the importance of "the dissemination to practising architects of technical information in an easily digestible form," adding that this book "can be described as a refresher course in the most recent developments and also as a kind of appendix to the conventional standard works on building construction." . . . "Prefabrication has not been covered except incidentally as it affects a particular material." . . . "This is not because its importance has been underestimated, but because the subject has been well covered in other works."

Concrete is dealt with by Dr. K. Hajnal-Kónyi in great detail. Beginning with the ingredients and their mixing, he next describes various methods of shuttering and surface treatment, the principles of designing reinforced concrete, the effect of "creep," new applications of reinforced concrete, and prestressed reinforced concrete, illustrating his learned disquisition with some remarkably fine photographs and many line drawings. Steel is treated in the next chapter by Mr. O. Bondy, who emphasises the importance of welding in modern framed construction. The editor adds a useful note on the use of steel in post-war prefabricated housing.

Mr. Philip Reece writes a chapter on timber which naturally deals with large laminated trusses, modern adhesives and connecters, and plywood, rather than with traditional methods. He illustrates a timber truss of 240 feet span! Mr. Cheesman's chapter on glass includes sections on "foamed" (aerated) glass, Thermolux, double glazing, glass blocks, glass and concrete construction, and several recent innovations. Mr. W. B. McKay manages to find a surprising number of novelties connected with bricklaying, in the form of large "precast" brick panels, numerous ingenious methods of reinforcement and devices for avoiding normal delays in plumbing angles. Mr. P. Scholberg's chapter on "Light Metals" is mainly concerned with aluminium. He follows it with another chapter on plastics in which he makes the interesting forecast that "the all-plastic flushing cistern will be available soon. Freedom from corrosion makes plastics almost the ideal material for this purpose." The final chapter, by Mr. Handisyde, briefly discusses insulation against heat and sound.

The book is generously illustrated and well produced. It should be useful to all practising architects.

M. S. B.

AN INTRODUCTION TO PLANNING. By John J. Clarke, M.A., F.S.S. (Cleaver-Hume Press, Ltd.) 12s. 6d. net.

This book is written with a clarity to be expected from the pen of an author experienced in matters of law. An exposition of the Town and Country Planning Act of 1947 is to be found here in a form that will be helpful not only to a student of this subject, but also to all those members of authorities in whose hands the administration of the Act is vested.

Discussion and explanation of the 1947 Act is preceded by a brief historical survey of earlier enactments, and simplicity of explanation has been accorded to a complicated piece of legislation.

R. S. D.

BOOKS RECEIVED

STRESS ANALYSIS AND DESIGN OF ELEMENTARY STRUCTURES. Second Edition. By James H. Cissel. (London: Chapman and Hall, Ltd.) Price 30s.

LAND-VALUE REFORM IN THEORY AND PRACTICE. By James Dundas White, LL.D. (London: Land and Liberty Press, Ltd.) Price 2s.

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NEWS IN BRIEF

Working Party Questionnaire.

The special committee appointed by the council of the Institute of Registered Architects to consider the questionnaire from the Working Party on the building industry have now completed their work, and the replies have been forwarded to the Ministry of Works.

Regency House to be Preserved.

The Minister of Town and Country Planning has decided that a Building Preservation Order shall be made to prevent the Worthing town council from demolishing Beach House, a building of the Regency period. The council had proposed to replace the house with a bathing establishment.

L.M.B.A. Ladies' Festival.

The southern area of the L.M.B.A. held its annual Ladies' Festival on December 1 at the Greyhound Hotel, Croydon. More than 300 guests attended the function under the chairmanship of Mr. George Harris, a director of Walker (Tooting), Ltd., building and civil engineering contractors.

Single-storey Concrete Buildings.

The Cement and Concrete Association has published a booklet entitled "Structural Precast Reinforced Concrete" which describes some of the single-storey buildings recently constructed. These include factories, laboratories, a research station, a farm, a hangar and a church. The booklet, which is well illustrated with photographs and plans, may be obtained free of charge on application to the Association at 52, Grosvenor-gardens, S.W.1.

British Paint Manufacturers.

The annual meeting of the Society of British Paint Manufacturers, Ltd., was held at the May Fair Hotel, W.1, on December 6. The President, Mr. N. M. Hadfield, was in the chair. It was decided that the new council should consist of 15 members as for the previous year. Messrs. C. A. Carter, W. J. Darby, C. G. Heywood and H. Leigh were re-elected, and a new member of the council was Mr. C. A. F. Hastilow. Messrs. Lithgow, Nelson and Co. were re-appointed auditors and Mr. C. R. Preston was re-appointed honorary treasurer.

At the meeting of the council which immediately followed, Mr. C. R. Petrie, who had been a vice-president, was elected President. Mr. C. A. Carter was re-elected a vice-president, and the vacancy caused by Mr. Petrie's appointment was filled by Mr. F. W. Burmann.

Report on Capetown Foreshore Plan.

The final report of the Cape Town Foreshore joint technical committee has now been published. The report shows how a plan (referred to in *The Builder* of February 13) was created for the development of an area of approximately 350 acres which was reclaimed from the Atlantic Ocean when the Duncan Dock was built during recent years. The story of the many and often conflicting requirements of government and local authorities, of private enterprise and of the ordinary citizen, is told in the book which contains about seventy photographs and five coloured plates. Apart from its value as a student's text book and its usefulness to town-planners and architects, the publication contains a great deal of historical information about Cape Town and its harbour. Copies of the report, which is entitled "The Cape Town Foreshore Plan," are available from South Africa House, Trafalgar-square, W.C.2, at £1 1s., including postage.

Employment among Builders.

The number employed in building and civil engineering decreased during October by 10,000 to 1,376,000. The number of unemployed persons registered at November 15 in all trades and industries was 327,900, compared with 314,500 at October 11, representing about 1½ per cent. of the industrial population. This increase was mainly seasonal.

Contract for U.N. Building.

Four of the largest building contracting firms in New York have been awarded jointly the contract for erecting the 39-storey building which is to house the United Nations secretariat on the site of what is to be the permanent home of the United Nations, along the East River. It is understood (states *The Times*) that the successful tender was in the neighbourhood of $25m. The foundation work will be started in January, and it is expected that the building will be ready for occupation in the late summer or early autumn of 1950.

Northern Ireland Garden Factory.

Richard Atkinson and Co., Ltd., of Dublin, propose to build a garden factory for the manufacture of poplin ties and other fabrics at the Carrickblacker Estate, County Armagh. It is hoped to commence building the factory during the next 12 months. Key-workers in the factory will be accommodated in a village of attractive design which is to be built, leaving about 120 acres of pasture land to support a herd of from 50-60 pedigree Ayrshire cattle. A byre and dairy have been built, and the latter is being equipped.

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Development Plan for Worthing.

West Sussex County Council is to prepare a development plan for Worthing. The county planning officer, Mr. J. G. Jefferson, proposes that the western area should be dealt with first.

A Guide to the Planning Act.

A handbook entitled "The Land and Property Owners' Guide," recently published at 2s. 6d. by the British Publishing Co., Ltd., Eastgate House, Gloucester, deals mainly with parts three, six and seven of the Town and Country Planning Act, 1947; permission to develop land, payments in respect of depreciation of land values and development charges.

Plastic Water Piping.

Experiments in the use of plastics as a substitute for lead in water piping now being made by the Coventry Water Undertaking may lead to important new developments in the water industry. Plastic pipes have been installed in several council houses in the city, so that the material may be tested in ordinary domestic use. It was at the request of the city architect that plastic piping was first installed in Coventry houses two years ago, and so far no real objections have been found to its use. Mr. Norman Pugh, the city water engineer, said if a method of jointing the piping could be established, it would leave much to commend it as a means of conveying cold water.

Proposals for Health Centres.

A statement on health centres, issued by the Association of Building Technicians, makes the following suggestions for minimum measures:—Every local authority to choose and acquire immediately the sites for the full programme of 2,000 health centres. At least one permanent health centre to be sanctioned forthwith in each local authority area. Local authorities to be instructed to make a thorough search for premises suitable for adaptation as temporary health centres. The Government to use its powers under the Building Materials and Housing Act, 1945, to make production agreements with manufacturers of structural parts and equipment for new health centres.

New Section at the Building Centre.

A new electrical section of the Building Centre, 9, Conduit-street, W.1, was opened on December 9, by Mr. J. Eccles, chairman of the British Electrical Development Association council. On a modern reception desk there is available a supply of E.D.A. brochures, leaflets and other printed information for the use of architects and others interested in the application of electricity to buildings. There is also a display of the latest types of domestic refrigerator and a range of cookers, all of which are provided with thermostatic oven control, and some with graduated control of the griller and boiling rings. A special display is devoted to showing the constructional features of the 1½-gallon single-point electric water heater. The methods of applying an immersion heater to a coal-electric hot-water system and a circulator to an all-electric and a coal-electric system are also shown. Symbolic displays indicate the correct method of running hot-water pipes to basins, sinks and towel airers. In the central part of the electrical section are examples of electric washing machines, drying cabinets, suction cleaners, irons, ventilating fans, kettles and other small appliances. The platform is pierced at intervals by a metal grille, through which

can be seen the tubular low-temperature electric heating installation. This display will be constantly changed in order to keep abreast with developments.

A Thousand Houses Built at Tynemouth.

In October, 1945, the Borough of Tynemouth commenced its post-war Five-Year Housing Programme of 2,700 houses; the corporation has now completed 1,000 houses. Private enterprise has added 150 to this figure. A further 539 corporation houses are either in course of construction or contracted for, and private enterprise is erecting 25 houses. Of the corporation houses completed, 46 were rebuilt bombed houses, 824 were traditional houses and 130 were "Orlit" permanent non-traditional. The building of temporary prefabs has not been undertaken.

Electrical Employment Conditions.

Conditions of employment of building and civil engineering workers in the electricity supply industry will, in future, be settled by a national joint committee. An agreement to this effect has been signed by the British Electricity Authority and the National Federation of Building Trades Operatives. The agreement establishes for the first time a National Joint (Building and Engineering) Committee on which there will be representatives of the Authority, the Electricity Boards and the North of Scotland Hydro-Electric Board, together with representatives of the National Federation. The Committee will settle, by negotiation, the terms and conditions of employment throughout the country, and provision is made for arbitration in the event of failure to reach a settlement on any matter within the scope of the Committee. Arrangements will be made for consultation on matters arising from the local application of the negotiated conditions.

Building Materials Control Relaxed.

The Northern Ireland Ministry of Finance has issued an order removing control from the production of building bricks, other than cement-concrete building bricks; the distribution of all kinds of bricks; the price of common clay bricks, and the distribution of cement brought into Northern Ireland otherwise than from Great Britain or Eire. Manufacturers of cement-concrete bricks will still require a licence from the Ministry of Finance, and manufacturers of other pre-cast walling units will also need a licence. The new order authorises an increase of nine-tenths of a penny per gallon on existing maximum prices for road tar sold in Northern Ireland, operating from November 26 last.

L.M.B.A. INFORMATION SERVICE

The Information Service of the London Master Builders Association gives in Circular No. 7/1948 details of an agreement arrived at between the National Federation of Building Trades Employers and the Federation of Civil Engineering Contractors to the effect that building firms throughout the country should observe the "plus rates" (over the building labourers' rates) prescribed by the Civil Engineering Conciliation Board. The new provisions for crane and derrick drivers have now been agreed by that Board and became effective on November 29 last.

CHRISTMAS HOLIDAYS, 1948. In accordance with the National Joint Agreements the two public holidays at Christmas this year in the London District will be Christmas Day, Saturday, December 25 and Boxing Day, Monday, December 27.

NATIONALISED HAULAGE

INDEPENDENT HAULIERS OFFER TO CO-OPERATE WITH NATIONALISED UNDERTAKING

THE following statement has been issued by the Road Haulage Association: The Road Haulage Association is willing and ready to co-operate with the British Transport Commission in all matters wherever such co-operation is likely to maintain and promote a cheap and efficient service to the public. There are certain points, however, upon which it would be valuable to have information.

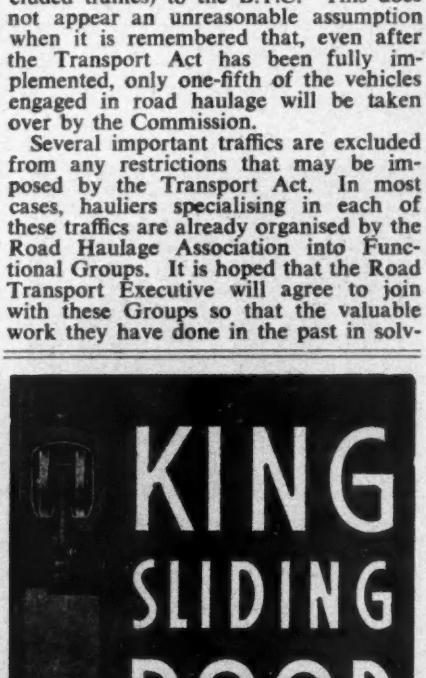
The carriage of goods by road for hire or reward is now the joint responsibility of the road haulage industry and the British Transport Commission. The R.H.A. would like to know as soon as possible to what extent the Commission, through the Road Transport Executive, will help hauliers in accordance with the duty laid upon it, not only to provide but "secure or promote the provision of an efficient, adequate, economical and properly integrated system of public inland transport."

Members of the road haulage industry regard short-distance road transport as, broadly speaking, their sphere of influence, traffic over long distances being left to a large extent (except for the excluded traffics) to the B.T.C. This does not appear an unreasonable assumption when it is remembered that, even after the Transport Act has been fully implemented, only one-fifth of the vehicles engaged in road haulage will be taken over by the Commission.

Several important traffics are excluded from any restrictions that may be imposed by the Transport Act. In most cases, hauliers specialising in each of these traffics are already organised by the Road Haulage Association into Functional Groups. It is hoped that the Road Transport Executive will agree to join with these Groups so that the valuable work they have done in the past in solving technical and other problems may continue in the future.

Where railway branch stations and branch lines are being closed, the road haulage industry hopes to be appointed in many localities as road agents for the Commission, and the R.H.A. would welcome the opportunity of discussing such matters with the Railway Executive.

The Road Haulage Association has in no way swerved from its belief that the personal service given by road transport under free enterprise cannot be equalled for cheapness and efficiency. This belief, however, need not interfere with co-operation between the Association and the Commission, or prevent the setting up of the necessary liaison machinery. It does, however, throw upon the R.H.A. the onus of ensuring throughout the country a general appreciation of the undoubted fact that free enterprise must remain predominant in road haulage even if the Transport Act is most rigorously implemented.



INCENTIVES IN BUILDING

A HACKNEY SCHEME

THE following information appears in the report of the Housing and Town Planning Committee to Hackney M.B.C.: "We report with pleasure that the four maisonettes comprising the Adley-street Extension Scheme will be available for letting by December 18. Possession of the site for building purposes was taken in the early part of August of this year, so that these dwellings have taken just a little over four months to erect. We are advised that the speed of erection has been brought about by improvement in organisation, team work and the introduction of an incentive bonus scheme, all of which have contributed to the successful outcome, as reflected in the financial results of this Scheme, which show a substantial saving over the direct labour estimate submitted to and approved by the London County Council. We feel that all concerned are to be congratulated upon this result which, in our view, is an indication that beneficial results are accruing from the further experience gained in direct labour works."

The Borough Engineer, Mr. G. L. A. Downing, A.M.Inst.C.E., informs us that the building work was broken down into tasks, and targets agreed with the operatives. The total amount of bonus paid worked out at about 6d. per hour per operative.

OFFICIAL NOTIFICATION

Hardwood for Flooring Blocks.

The Board of Trade announces that importers in possession of a licence to purchase and import under the Hardwood Overseas Procurement Scheme, Part III, may now submit for the Timber Control's approval specific offers of any species of hardwood (whether reserved for Control procurement or not) which are to be used in the manufacture of flooring blocks, subject to the following provisions:—(a) that the specification does not exceed 1.1/4 inch. in thickness, 4 1/4 inch. in width and 37 inch. in length; (b) that the buying price does not exceed 10s. per cubic foot, c.i.f. United Kingdom port; (c) that the Country of Origin shall be confined to any of the following:—Australasia (subject to the footnote Appendix "A," fourth revision), British East and West Africa, British Honduras, British West Indies, British Borneo, British Guiana, India, Ceylon, Burma, Malaya, France, French Ivory Coast, Cameroons, French Equatorial Africa (excluding Gaboon), Dutch Borneo, Dutch Guiana.

NEW WATER TUNNEL

SAFEGUARDING EAST LONDON'S SUPPLY

THE Metropolitan Water Board announce that a 60-in. main, 22½ miles long, is to be constructed from Hampton, Middlesex, to the south end of King George's Reservoir, Chingford, Essex, at a cost of approximately £4 million. For many years the water supply to East London has given anxiety because the residential and industrial development is outstripping the resources available from the River Lee. The demand for water will increase still further owing to housing reconstruction with modern sanitation and to the normal expansion of residential areas. On top of this there is the national policy to establish new towns in the Lee catchment area. In the past the deficiency has been made good as far as is practicable by infusing surplus Thames-derived filtered water into the area. To extend this practice it would be necessary to construct reserve filtration plant in the Thames Valley while equivalent filtration plant in the Lee Valley would lie idle for lack of raw water for filtration, and to increase the capacity of the distribution mains. Even then, in times of shortage, East London would only obtain the surplus.

It is therefore proposed to convey raw water from the Thames to the Lee Valley reservoirs in a tunnel of a new type. It will be about 6 ft. in diameter and lined with pre-cast interlocking concrete segments. The steel pipes will be welded together inside these segments and the annular space between the pipes and the segments will be filled in with grout, the whole forming a strong reinforced concrete water main. Sir William Halcrow and Partners are to undertake the work. In order to ascertain the troubles which may be encountered in the construction of such a tunnel, a start is to be made on a section under the M.W.B. Barn Elm works. The main is to run through Bushey Park and Richmond Park and the permission of the Ministry of Works and Buildings will have to be obtained for this part of the route. The Board considers that they should receive a Government contribution in compensation for the extra cost involved through the national policy for new towns in the Lee Valley area.

This main will not increase the total water resources of the Board, the provision for which will have to await the completion of a major programme for additional storage; but the tunnel main will not only enable the water that is available to the Board to be equally shared among all consumers, but will also safeguard the supply to the densely populated and highly industrialised districts of East London, including the dock areas of the Port of London Authority.

In a comment, the Board state:—

The members of the Board, who are public representatives and appointed by the local authorities in the area, cannot regard as satisfactory a position where there is a risk of failure in the supply in times of shortage to an area on which the life of London depends, a position which will continue if the proposed main is not constructed or if its construction is unduly delayed.

L.M.B.A. Donation.

The London Master Builders' Association has sent a donation of five guineas to the East Ham School of Building for its prize fund.

TRADE NEWS

Association's Anniversary.

The Brass and Copper Tube Association has reached its seventieth anniversary. In honour of the occasion, a dinner was held on December 8 at the Queen's Hotel, Birmingham, and was presided over by the chairman, Mr. A. S. Hollings.

New Depot at Tunbridge Wells.

To give improved service and quicker delivery from stock in the Kent and East Sussex Areas, Messrs. Johnson and Phillips, Ltd., of Victoria-way, Charlton, S.E.7, have now opened a new depot at Kensington-street, Tunbridge Wells. Large stocks of their cable and British National domestic appliances will be maintained.

Director Appointed.

Mr. E. L. Harber has been appointed a director of Barber-Greene Olding and Co., Ltd., manufacturers and exporters of Barber-Greene material-handling equipment, in place of Mr. C. T. Mitchell, who has resigned. Mr. Harber continues in his capacity as head of the Barber-Greene division of Jack Olding and Co., Ltd.

Plastic Stone Rendering.

The purpose of a booklet on "Plastic Stone Rendering," published by Callow and Keppich, Ltd., Shipham-road, Cheddar, Somerset, is to give all who are interested in the building industry a detailed account of the theory and practice of rendering as a method of preventing the penetration of moisture into buildings and, at the same time, providing a permanent decorative finish. Special reference is made to "Stonite" plastic stone rendering.

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LIVERPOOL 7

Timber Impregnation in Scotland.

Hickson's Timber Impregnation Co. (G.B.) Ltd. wish to draw attention to the fact that in certain advertisements the main distributors for Scotland were given as Timber Fireproofing Co., Ltd. The distributors are in fact Messrs. Brownlee and Co., Ltd., City Saw Mills, Port Dundas, Glasgow, C.4.

Rosebery-avenue Housing.

In connection with the article in our issue for December 10 on load-bearing reinforced walls, Messrs. J. L. Kier and Co., Ltd., the reinforced concrete specialists, pointed out with regard to Rosebery-avenue Housing Scheme, Finsbury, that although Messrs. Moss and Sons are the main contractors, Messrs. J. L. Kier have been responsible for the entire reinforced concrete work.

Reducing Building Costs.

Mr. F. N. Carmody, L.I.O.B., responding to a toast to the company, at Messrs. Tersons' fourth annual dinner-dance and cabaret, held at the Café Royal on December 17, paid tribute to the praiseworthy teamwork of the staff and operatives which had resulted in keeping work ahead of schedule and in upholding the management's policy of reducing building costs by keen tendering. Over 400 guests, employees and their wives attended.

Caustic Calcined Magnesite.

A lecture on "Austrian Caustic Calcined Magnesite" was given by Dr. H. Reisch at a recent London conference attended by representatives of Government departments, members of the Oxychloride Flooring Association and others. The lecturer dealt with the use of caustic calcined magnesite produced at the Oberdorf works in Austria for the oxychloride flooring industry. The material is sold by Messrs. Bush, Beach and Gent, Ltd., Marlow House, Lloyd's-avenue, London, E.C.3, who hold the selling concessions in the U.K., under the name of "B.B.G. Specials."

Booklet on Zinc Roll Cap Roofing.

Copies of a new publication, Zinc Roll Cap Roofing: Some Details for Plumbers and Sheet Metal Workers," may be obtained free of charge from the Zinc Development Association, Lincoln House, Turl-street, Oxford. The booklet is intended to replace and amplify a pre-war brochure containing information sheets on zinc as a roofing material, which is now out of print, and, like its predecessor, to serve as a supplement to the Association's standard publication, "Zinc: Roll Cap Roofing," which describes in detail the principles of the system for architects and builders as well as for the workman laying the roof.

THE SCOTTISH BUILDER

NEW BUILDINGS

Aberdeenshire.—New higher grade school to be erected at Kincorth site at £114,000, for which the architects are J. & C. Allan, Ross & Allan, 10, Bon Accord-sq., Aberdeen.

Chryston.—To be erected by the Scottish Social Housing Association, Ltd., 118 houses, for which the architect is J. Austin Bent, Palmerston-pl., Edinburgh.

Glasgow.—Alterations and additions for the Scottish Wholesale Co-operative Society, Ltd., at Wallace-st., Dolintober- and Carnoustie-streets, for which the architects and contractors are the Society's own staff, 119, Paisley-rd. and Shieldhall respectively.

Glasgow.—Corporation to erect canteen and staff accommodation, etc., at Amulree-st. from plans by the Housing Department Architects, 20, Trongate, Glasgow.

Lanarkshire.—C.C. to erect 75 houses at Newarthill site at Yett Farm, for which the architect is Samuel MacColl, County-bldgs., Hamilton.

Overton.—New bus garage, for which the architects are Cowie & Miller, 45, Cleland-rd., Wishaw.

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

DECEMBER 31.

†***East Suffolk C.C.**—Five police houses at 5 sites. E. J. Symcox (F.), County A., County Hall, Ipswich. Dep. £2 2s. Tenders by January 21.

†***Farnworth T.C.**—30 houses at Buckley-la. No. 2 site T.C., Town Hall. Dep. £3 3s.

†***Leeds Regional Hospital Board.**—Improvements to staff accommodation, etc., at Gateforth Sanatorium, Gateforth, nr. Selby. City A., Priestley House, Quarry Hill, Leeds 9. Dep. £2 2s. Tenders by January 10.

JANUARY 1.

†***Coventry E.C.**—Six classrooms at Coundon County School, Southbank-rd. W. L. Chinn, M.A., Director of Ed., The Council House. Dep. £2 2s.

JANUARY 3.

†***Mitcham B.C.**—34 houses at 3 sites. B.E. & S., Town Hall. Tenders by January 29.

JANUARY 5.

†***Essex C.C.**—Additions and structural alterations, redecorations and repairs at Boyles Court, Dark-la., Warley (approx. cost, £6,000). H. Conolly (F.), County A., County Hall, Chelmsford.

JANUARY 6.

†***East Ham C.B.**—40 maisonettes at Gooscley-la. estate. Chief Housing Officer, Town Hall. Dep. £2 2s.

JANUARY 7.

***Chertsey U.D.C.**—Repair, improvement and decoration to hutted camps. E. & S. Dep. £1 1s.

JANUARY 8.

***Dartford B.C.**—28 houses at Temple Hill neighbourhood Unit, Scheme 2B. T.C. Dep. £2 2s.

JANUARY 10.

***Brighton C.B.**—New buildings and reconstruction of properties at Pickershill Farm, Rodwell, nr. Lewes. Waterworks E., 12, Bond-st., Brighton 1. Dep. £3 3s.

†***Lindsey (Parts of Kesteven) C.C.**—Police house with office and garage at Helpringham, and at Tallington. C. B. Metcalfe (F.), County A., County Offices, Sleaford, Lincs. Tenders by January 24.

***Stamford T.C.**—(a) Drains, roads, paths, water mains and general site works; (b) conversion of 28 huts into 55 dwelling units at Empingham-rd. hostel. B.E. & S. Dep. £2 2s.

JANUARY 11.

***Fareham U.D.C.**—72 houses at Winnards Cope housing site, Barnes-la., Sarisbury. E. & S., Westbury Manor. Dep. £2 2s.

JANUARY 15.

***Saffron Walden R.D.C.**—8 houses, Rickling, and 8 at Great Sampford. A. W. Overall, C.

JANUARY 17.

Bolton C.B.—(a) 16 bungalows and 2 houses at Eastfield estate; (b) 14 bungalows at Crompton-rd. estate; (c) 16 bungalows at Lever Edge-la. (south) estate. Housing Director, Town Hall. Dep. £1 1s. each set.

***Dunstable T.C.**—Conversion of 6 brick hutments into 12 bungalows and contingent works at Park estate. R. R. Hole (C.), B.S., Municipal Offices. Dep. £1 1s.

Newark R.D.C.—Six houses and sewage disposal plant at South Scarle and 4 houses and sewage disposal plant at Besthorpe. Wm. Saunders & Partners, 24, Castle-gate, Newark-on-Trent.

FEBRUARY 7.

***Bucks C.C.**—Erection of Secondary Modern School at Stoke-rd., Slough. Guy R. Crouch, C., County Hall, Aylesbury. Dep. £5 5s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

DECEMBER 30.

†***Folkestone T.C.**—Electrical wiring 72 houses at Horn-st. site. B.E. Dep. £1 1s.

†***Folkestone T.C.**—Installation of hot water system in 72 houses at Horn-st. site. B.E. Dep. £1 1s.

ROADS, SEWERAGE AND WATER WORKS

JANUARY 12.

***Bootle C.B.**—Roads and sewers at Ford. B.E. & S. Dep. £2 2s.

JANUARY 19.

***Witham U.D.C.**—Roads and sewers, etc., at Ravenhall Oak housing site. A. E. Wiseman (F.), 10, Duke-st., Chelmsford. Dep. £2 2s.

GENERAL BUILDING WORK

(LONDON)

Acton.—FLATS.—T.C. planning to build 9 flats at Uxbridge-rd. at £13,050.

Bermondsey.—FLATS.—B.C. approved plans and working drawings for 18 flats and 1 shop at Enid-st. (Block 6). Mr. C. J. Burnett (F.), Boro' A.

Fulham.—FLATS.—B.C. have been granted permission to erect 400 flats.

Greenwich.—HOUSING.—B.C. to purchase land at 100-110 (even), Elliscombe-rd. and 159, Victoria-way, for housing purposes.

Hampstead.—LIBRARY EXTENSION.—B.C. to purchase site at 210-212, Finchley-rd., for central library extension.

Kingston.—FLATS.—T.C. to build 119 flats at Cumberland Lodge without Government subsidy. Sydney Clough & Partners (F.).

Wandsworth.—HOUSING.—B.C. to purchase 23, Iron Mill-pl., 100, Oldridge-rd., 109, Clapham Park-rd., and 30, Holmewood-gdns., for housing purposes.

Wandsworth.—HOUSING.—B.C. to purchase 214, Lyham-rd.; 2, 4, 6, 13 to 25 (odd), 27, 29, 29a, 31, 33 and 35, Kirkby-st.; 1 to 15 (odd), 10, 12 to 16 (even); 2 and 4, Saxby-st., for housing purposes.

(PROVINCIAL)

Accrington.—T.C. propose central bus station off Broadway.

Arnold.—M.H. allocated 120 houses for 1949 (24 by private builders)—T.C. to purchase site at Front-st. for housing.

Ashington.—Miners' Welfare Commission propose pithead baths at Ashington Colliery. K. Burke (L.), Singleton House, Northumberland-rd., Newcastle-upon-Tyne.

Ashton-under-Lyne.—T.C. propose 300 houses in 1949.

Atherton.—U.D.C. propose 134 additional houses to Dec. 1, 1949.—Architects instructed to prepare scheme for completion of site No. 5.

Bakewell.—U.D.C. received further 20 houses for 1949.

Barrow-in-Furness.—T.C. propose houses at Rock Lea and Monks Croft at £9,725.

Birkenhead.—T.C. propose police station and public conveniences at Upton-rd., Claughton.

Bolton.—T.C. approved:—Welfare room and works canteen at Dolly Blue Works, Shepherd's Cross-st., for William Edge & Sons, Ltd.—T.C. propose additions to Mayor-st. cleansing depot at £5,100.

Bramhall.—Ches. E.C. propose extensions to county prim. sch. at Brocklehurst Field.

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Bristol.—C.C. agreed to layout of Broadmead shopping centre, to be developed in 3 stages over a period of 6 to 9 years.

Bromsgrove.—U.D.C. approved:—Additions to Golden Cross Bakery, Golden Cross-la., J. Goode; additions to works, 166, Worcester-st., Insleays.

Burnley.—T.C. propose extensions to Rosehill prim. sch.

Cheadle (Staffs).—R.D.C. received approval of M.H. for 100 additional houses in 1949.

Chester.—Bent's Brewery Co., Ltd., 30, Johnson-st., Liverpool 3, propose alterations to Universal Inn.

Cockerham.—C.E. Authorities propose alterations to day schools at £15,000.

Consett.—500 houses to be erected by U.D.C. nr. Gloucester-rd.

Coventry.—T.C. propose 463 houses and 9 shops off Torrington-ave. and Tile Hill-la.

Croston.—Mawdesley C.E. School Managers propose extensions to church schs.

Cumberland.—C.A., 15, Portland-sq., Carlisle, prepared plans for erection of practical rooms at Lapstone-rd. Council sch.

Darwen.—T.C. approved layout of St. James' housing estate.

Daventry.—R.D.C. approved adaptation of Fawley House for biscuit and chocolate factory for Edgar J. Saxon & Co., Ltd., food mfrs., 314, Uxbridge-rd., Acton, W.3.—R.D.C. propose 30 agricultural houses at 11 sites.—R.D.C. propose bungalows for aged people.—T.C. received allocation for 40 houses for 1949.

Doncaster. — T.C. approved: — Sawmill, Childer's-st., for R. W. Borley; rebuilding Scarborough Arms Hotel, Cleveland-st., for Whitworth, Son & Nephew, Ltd., The Brewery, Wath-on-Dearne, nr. Rotherham.

Drayton.—R.D.C. propose 12 houses at The Links site, Hinstock. Scheme to be prepared for village hall, sch., shopping centre.

Durham.—C.C. proposes sch. at Boldon Colliery. Plans by the C.A., Court-la.

Durham.—C.C. proposes gram. sch. at Whitburn Village.

Durham.—C.C. submitted plan for 74 schs. to be constructed in 15 years to M.E.

Gateshead.—S. R. Finn, estate agent, South Shields, is planning flats at Duncan-st., Camperdown-st. and Moore-st.

Hartlepool.—M.H. allocated 100 houses for 1949.

Hastings.—T.C. applying to M.H. for consent to erection of 14 blocks of flats at Rock-la. and 4 at Red Lake at £82,414.

Ipswich.—T.C. received M.H.'s permission to build 92 houses at Whitton White House estate at £101,980.—T.C. considering acquisition of land at Castle Hill estate, Whitton, for housing estate.

Jarrow.—T.C. allocated 150 houses for 1949.—T.C. to build 50 Newland-type houses at South Leam-la. estate. Boro' E., H. W. T. Perkins, Town Hall.

Kirkby-in-Ashfield.—M.H. allocated 80 houses for 1949.

Knutsford.—Ches. C.C. propose extensions to Kilrie children's homes at £20,000.

Macclesfield.—T.C. and Memorial Hall Building Cttee. propose memorial public hall at central site.

Manchester. — T.C. approved: — Laundry, Albany-rd. and Manchester-rd., Choriton-cum-Hardy, for White Star Laundries, Ltd. (Matley, Brotherton & Mills, architects, 39, Oxford-st.); canteen at works, New Elizabeth-st. and Cheetham Hill-rd., Cheetham, for Kennings, Ltd.; 52 cottage flats and 424 houses, Woodhouse Park and Moss Nook neighbourhood unit, Wythenshawe, for Housing Cttee. L. Mackenzie (L.), housing director, Town Hall.

Market Drayton.—U.D.C. propose development at Longlands-la. for housing estate.—Received further allocation for 54 houses.

Middlesbrough.—B.E. (J. A. Kenyon) prepared plan for 540 houses at Beechwood.

Middlesbrough.—Tennant & Smith, Ropergate, Pontefract, are architects for alterations to bank in Corporation-rd. for Trustees of Yorkshire County Savings Bank. Garbutt, Archibald & Archibald, Albert-rd., are architects for erection of 8 houses at Easterside-rd. for T. A. Greenwell & Co., builders, 145, Albert-rd.

Middlewich.—Ches. C.C. propose conversion of "The Limes," Chester-rd., into children's home.

Minster.—22 more houses to be built in 1949.

Morecambe and Heysham.—T.C. approved:—Houses, Clevelands-ave., for A. Whitehead; houses, Colwyn-ave., for A. Heathcote; motor coach station, Thornton-rd., for Florence Motors, Ltd., Empire garage, Alice-st.

Nantwich.—R.D.C. propose houses at Bunbury, Wrenbury, Weston, Acton, Shavington, Audlem and Newhall.

Newport (Salop).—U.D.C. to prepare plans for 50 houses.

Northallerton.—R.D.C. to build 12 farm

workers' houses at Great Smeaton, Great Langton, Danby Wiske, Thornton-la-Beans, Sigston, and Ellerbeck. 30 houses will be allocated shortly.

Northampton.—T.C. propose redevelopment off Gold-st. and The Drapery.

Northfield.—Austin Motor Co., Ltd., propose extensions to Longbridge works for new chassis erecting, body mounting and finishing works.

North Riding.—C.C. received permission to build 6 schs. in 1949 as follows:—Scarborough (2), Redcar (2), Catterick (1), Saltburn (1). J. Catchpole (A.), County Hall, Northallerton.

Retford.—M.H. allocated 80 houses for 1949. 16 will be built by private enterprise.

Rotherham. — T.C. approved: — Extensions, Montrose Works, Rawmarsh-rd., Watt & Ferguson, Ltd.; additions, Swindon House, Moorgate-rd., for United Steel Cos., Ltd.; loco shed, Grange Colliery, Upper Wortley-rd., for N.C.B.; adaptations, Sitwell House, and Rotherstoke, Moorgate-rd., for hostels, and Park Mount, Clifton-la., for children's home for Welfare Services cttee.—E.C. received approval of M.O.E. for Blackburn prim. sch.—T.C. propose additions to police headquarters.

Salford.—T.C. approved:—Additions, 117, Chapel-st., Manchester, for Bonding Warehousing Co., Ltd.; alterations, Alexandra Cinema, Rumford-st., for Ogden's Cinemas, Ltd.; additions to works, Caroline-st., Lower Broughton, for Erskine, Heap & Co., Ltd.; new front elevation, Church Inn, Ford-la., Pendleton, for H. Taylor.

Salford.—T.C. approved 93 flats, Salford Brow, Greengate, for Salford Housing, Ltd., 7, Chapel-walks, Manchester 2. Halliday & Agate (F/F.), 14, John Dalton-st., Manchester 2.

Salford.—T.C. propose new City Police headquarters.

Sheffield.—E.C. propose additions to College of Commerce and Technology at £11,000.

Shilbottle (Northumberland).—Northern Division Coal Board, Newcastle-on-Tyne, to carry out reorganisation to erect new offices and engineering workshops at Shilbottle and Whittle Colliery.

Smethwick.—T.C. approved extensions to works, Bearswood-rd., for British Pens, Ltd.; extensions, Tudor Works, Windmill-la., Payne & Griffiths, Ltd.

South Ockenden.—Sec. sch. to be built at £220,160.

South Shields.—Plans prepared by Boro' E. for erection of 50 houses at Lizard-la. and 34 single-storey houses at Lonnen, Quarry-la.

Stepney.—L.C.C. being recommended by their town planning cttee. to acquire 38 acres of land at Stepney/Poplar reconstruction area at £500,000.

Stockport.—T.C. propose new branch library, Gorton-rd., Reddish.

Stretford.—T.C. approved:—Extensions to works, Elevator-rd., for G. Mason & Co., Ltd.; extensions to factory, Elevator-rd., for Frank Rosser, Ltd.

Ulverston.—Lancs county planning cttee. approved plans for neighbourhood unit which will involve the development of 164 acres in four 5-yearly stages with 944 houses, 2 nursery schs., one jun. and inf. sch., 29 shops, 2 public-houses, 7 domestic industries, community centre, church, communal surgery and library.

Walton-le-Dale.—U.D.C. propose 100 houses for 1949 (20 by private enterprise).—U.D.C. propose bungalows for aged people.

Warrington.—T.C. approved extensions to works, Holt-st., for Warrington Motor Co., Ltd.

West Bridgford.—M.H. allocated 120 houses for 1949 (24 by private enterprise).

West Hartlepool.—Layout plans approved for 200 houses at Seaton-la. estate, Oxford-rd., Stockton-rd., Kingsley-ave., Waverley-ter. and Sheridan-gr. Plans by Boro' A.

West Hartlepool.—E.C. seeking sanction to proceed with building of assembly halls, dining-room and kitchen at Seaton-la. county prim. sch. Boro' A. to prepare plans for proposed Rift House county prim. sch. for E.C.

Whitby.—T.C. to erect 50 houses in 1949.

Wigan.—T.C. propose:—new National and Blue Coat sch. nr. Hallgate; three-stream technical sch. at Rectory Glebe land.

Winton.—Lancs E.C. propose new infants' and jun. sch. at Alder Park.

Workington.—T.C. approved:—Extensions to works, Moss Bay, for United Steel Co., Ltd.; cafe, Vulcan-la., for Workington Beehive Co-op. Soc., Ltd., Oxford-st.; Airey houses, Rose Hill, Harrington, for Housing Cttee.—T.C. propose 8 shops at Pearl-rd., Salterbeck (Prof. Allen, architect).

Wrexham.—Denbighshire E.C. propose prim. sch. at Rossett.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Aberdeen.—Suite of shops and houses at Great Northern-rd., for the Northern Co-operative Society, Ltd. Tawse & Allan, architects, 343, Union-st., Aberdeen: W. K. MacLeod, Ltd., Aberdeen.

Bromley (Kent).—86 houses at Coppice estate for T.C.: J. Cauldwell Walker, Bromley, £124,790.

Cheadle, Staffs.—Six houses and sewage disposal plant at Whiston for R.D.C. J. W. Burton, S., Council Offices, Leek-rd. *J. A. Bailey, Tape-st., Cheadle, Stoke-on-Trent, Staffs, £8,889.

Clitheroe.—12 houses for aged at Chatburn for R.D.C. S. Taylor, Son & Platt (F/A.), 60, Manchester-rd., Burnley. *R. J. Barton & Sons, Ltd., 666a, Liverpool-rd., Ainsdale, Southport.

Coatbridge.—New block of 6 classrooms at Woodside School, for Lanarkshire C.C. William Watt, architect, Albert-st., Motherwell. Formation of raft, bolting, etc.: *Mayco, Ltd., Glasgow. Construction, etc., of classrooms: *Bristol Aeroplane Co. (Housing), Ltd. Drainage work, etc.: *Loudon & Inglis, Coatbridge. Plumber and sanitary engineering works, etc.: *Lanarkshire Direct Labour Dept., Motherwell. Electric lighting and heating, etc.: *E. J. Stible & Co., Coatbridge. Special floors, etc.: *Oswald Toffolo & Co., Ltd., Glasgow. Granolithic floors, etc.: *McCartney & Reid, Wishaw. Sanitary fittings, etc.: *John Glendinning & Sons, Glasgow. Electric tubular fittings, etc.: *General Electric Co., Glasgow (estimated cost £23,000).

Coventry.—Rebuilding assembly hall at Barrs Hill School for E.C. D. E. E. Gibson, M.A. (A.), City A., 1a, Warwick-row. *A. F. Alsop (Coventry), Ltd., Coventry, £4,814.

Cumberland.—Four police houses for C.C. J. H. Haughan (F.), County A., County Offices, Carlisle. *J. Twiname, Ltd., Brigham, Cockermouth.

Denny.—New classroom at Public School, for Stirlingshire C.C.: *Duncan Stewart (Bonnybridge), Ltd., Bonnybridge.

Dursley.—Eight houses at 3 sites for R.D.C. Eric Cole & Partners (FF.), Cirencester. Kingswood site (2): *H. W. Tily & Son, Ltd., 70, Broad-st., Chipping Sodbury, Glos., £3,000; Slimbridge site (2): *Leonard J. Watts, 92, Gloucester-rd., Bishopston, Bristol, 7, £3,260; Woodfield site (4): *H. W. Tily & Son, Ltd., 70, Broad-st., Chipping Sodbury, Glos., £6,200.

Gateshead.—Conversion of Windy Nook Isolation Hospital into preliminary training school for nurses for Newcastle Hospital Board, Osborne-rd., Newcastle-on-Tyne: *Direct Labour, £11,281.

Glasgow.—New classrooms at Levern School, Priesthill. John MacNab, architect, 129, Bath-st., Glasgow: Bristol Aeroplane Co. (Housing), Ltd., Weston-super-Mare.

Hamilton.—New block at St. Mary's R.C. School, for Lanarkshire C.C. William Watt, architect, Albert-st., Motherwell. Formation of raft, bolting, etc.: *Mayco, Ltd., Glasgow. Construction, etc., of classrooms: *Bristol Aeroplane Co. (Housing), Ltd. Drainage works, etc.: *Loudon & Inglis, Coatbridge. Plumber and sanitary engineering works, etc.: *Lanarkshire Direct Labour Dept., Motherwell.

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Hartlepool.—10 houses at Prissick-st. area for T.C. R. H. Snowball, B.E.: *M. Rennie & Sons, Regent-sq., Hartlepool (approved by M.H.).

Ilford.—Works for B.C. 10 houses at Barley-la.: *Nash Properties, £13,273; 24 houses at Marston-rd.: *Daniel T. Jackson, £33,285; 20 at Roundaway-rd.: *Tersons, Ltd., £36,007.

Islington.—Works for B.C. 136 flats, tenants' common room, communal laundry, chapel of rest, etc., at Canonbury site known as "Sickert Court":

John Laing & Son, Ltd., N.W.7 ...	£289,363
Davis Contractors, Ltd., N.W.6... ...	282,031
Taylor Woodrow Construction, Ltd., Southall	279,547
A. T. Rowley (London), Ltd., N.17 ...	277,416
Allen Fairhead & Sons, Ltd., Middlesex	276,338
Patman & Potheringham, Ltd., N.1 ...	273,818
Harry Neal, Ltd., W.1	272,438
Wates South Western Estates, Ltd., S.W.16	271,887
Geo. Parker & Sons, Ltd., S.E.15 ...	270,560
Griggs & Son, Ltd., S.W.1.	269,450
Rowley Bros., Ltd., N.17	268,975
Simms, Sons & Cooke, Ltd., W.1 ...	268,348
Dove Bros., Ltd., N.1	263,786
*Gee, Walker & Slater, Ltd., 100, Park-la., W.1	256,857

War damage repairs and interior decoration of "Blythe Mansions": *Gee, Walker & Slater, Ltd., 100, Park-la., W.1, £12,769.

Kettering.—42 houses at Stamford-rd. estate for T.C. Major J. P. Haugh, O.B.E., F.R.I.C.S., B.S., Municipal Offices. *East Midlands Construction Co., Ltd.

L.C.C.—Contracts exceeding £2,500 in value placed by L.C.C. during period ending December 16:—Electrical installation at Upper Hornsey-rd. School, Islington: The Etna Lighting & Heating Co., Ltd., Birmingham. Erection of one block of dwellings and 16 perambulator sheds at Heston-rd. site, Camberwell: H. T. Oliver & Sons, Ltd. Construction of blocks of dwellings and perambulator sheds at Whiston estate, Shoreditch: Walter Lawrence & Son, Ltd.

¶London (Admiralty).—*Portsmouth*: United Services (Officers) recreation ground, lounge bar and verandah: John Hunt, Ltd., South Wharf, Cleveland-rd., Gosport, Hants.

¶London (M.O.W.).—Contracts placed by M.O.W. during week ended December 11.—*London:* Houses of Parliament, installation of mechanical services and ventilation plant at new boiler houses, Brightside Foundry and Engineering Co., Ltd., Craven House, Northumberland-ave., W.C.2. General Post Office, 84, Martin's-le-Grand, E.C.1, internal cleaning, Wm. Winstanley & Co., Ltd., Windsor House, 46, Victoria-st., S.W.1. Wormwood Scrubbs Prison, erection of flats, C. F. Kearley, Ltd., Grove Works, British-gr., Chiswick, W.4. Stock-st. School, West Ham, kitchen and dining-room, A. E. Symes, Ltd., 1a, Carpenters-rd., Stratford, E.15. M.O.C.A., Woburn-pl., W.C.1, alterations and decorations, Turnbull & Son, 9, Northumberland-alley, E.C.3. Temperate House, Kew Gardens, internal painting, Decorative Art Guild, 43, Lower Belgrave-sq., S.W.1. *Ches.:* Parklands C. School, Little Sutton, hutted accommodation, Angus Collin, Ltd., Chester-rd., Little Sutton, Wirral. *Durham:* Dodmire School, Darlington, school meals accommodation, Bussey & Armstrong, Brinkburn-rd., Darlington. *Glam:* Maesteg, telephone exchange, Gee, Walker & Slater, Ltd., Coychurch-rd., Bridgend. *Hampshire:* Hiltingbury Polish Hostel, Chandlers Ford, nr. Southampton, adaptations to hutting, Davies Evans (Contractors), Ltd., Leigh-rd., Eastleigh, Hants. *Kent:* County Primary School, Brenchley (Paddock Wood), kitchen and dining-room, H. Goodsell, 52, Sandling-rd., Maidstone. *Middlx:* Tudor-rd. School, Southall, kitchen and dining-room, Geo. Moss & Sons, Ltd., Cranleigh Wharf, Lady Margaret-rd., Southall, Middx. *Midlothian:* East Calder J. S. School, kitchen, dining-room and scullery, J. Crow & Sons, Ltd., 3, Coates-pl., Edinburgh. *Oxfordshire:* New Site, Scotland End, Hook Norton, temporary classrooms and dining accommodation, Hinkins & Frewin, 2, West Bar, Banbury, Oxon. *Renfrewshire:* Greenock Academy, temporary classrooms and dining accommodation, J. Preston & Sons, Ltd., 26, Inverskip-st., Greenock. *Yorks:* Sheffield, N.E. Dist. Office (T.S.O.), M. J. Gleeson, Ltd., 816, Chesterfield-rd., Sheffield.

Long Eaton.—40 houses at Wilsthorpe-rd. estate for U.D.C. H. Raven, M.I.Mun.E., S., Town Hall. (20) *E. H. Parker, 1, Hawthorn-ave., Tamworth-rd., Long Eaton, Nottingham, £27,646; (20) *A. H. Taylor, Attenborough, Beeston, Nottingham, £27,574.

Mansfield Woodhouse.—38 houses at Cox-la. estate for U.D.C. L. Walker, M.I.Mun.E., Council Offices, Manor House. *Whiteheads (Public Contractors), Ltd., Cedar-rd., Mansfield, Notts.

Middlesbrough. — Alterations to General Hospital for Newcastle-on-Tyne Hospital Board, Osborne-rd., Newcastle-on-Tyne: *Direct Labour, £7,860.

Midlothian.—New church halls, etc., at East Camos-pl., Bowhill. Gibson & Laing, architects, 25, Palmerston-pl., Edinburgh: *Hepburn Bros., Ltd., Edinburgh.

Newcastle.—158 houses at Montague estate for City Council: *Cussins (Contractors), Ltd., Newcastle, £189,685.

Newcastle-on-Tyne.—Temporary offices, etc., at Orchard House, Collingwood-ter., for G. Wimpey & Co.: *Direct Labour.

New Windsor Royal.—18 houses at Dedworth Manor, Central estate, for T.C. G. S. Baker, M.I.Mun.E., B.E. Quantities by Henry Cooper & Son, Reading: *W. Varney, Ltd., Windsor, £21,290.

Norman Cross.—12 pairs of houses at 3 sites. Ruddle & Wilkinson (F. & L.), Causeway-chbrs., Peterborough: *Henry J. Finnian, Ltd., 62, Oxney-rd., Peterborough (subject to M.H. approval).

Penzance.—27 houses at Alverton estate (Contract 17, section No. 1); 9 houses at Mousehole (Saltponds, Contract 18). J. H. Blight, F.R.I.C.S., M.I.Mun.E., B.E. & S. Quantities by Gleeds (Plymouth), Ltd., Plymouth, Devon: *Venn Bros., Uxbridge-rd., Hayes, Middlesex, £36,154 and £12,310.

Plymouth.—Modern secondary school at Honicknowle. Louis de Soissons, A.R.A., & Partners, 11, The Crescent, Plymouth. Quantities by H. S. Haughton & Partners, 14, Glenwood-rd., Plymouth: ‡Staverton Builders, Ltd., Staverton Bridge Mill, Totnes, £143,532.

Sandown-Shanklin.—Four pairs of houses at Green la. for U.D.C. Tom Josey, S., Town Hall. Quantities by N. G. Shears, 122, St. James-st., Newport, I.W.: *Wm. Brown (Sandown), Ltd., Albert-rd., Sandown, £2,798.

Sedgley.—32 houses at Gibbons Hill estate for U.D.C. W. M. Jones, B.Sc., A.M.I.C.E., S., The Council House. *Tomlinson Bros., "Wyndover," High Park-cres. Sedgley, nr. Dudley.

Stone.—42 houses at various sites, for R.D.C. (4) *J. H. Broadhurst & Son, Ltd., 594, High-la., Tunstall, Stoke-on-Trent, £6,219; (4) *J. Banks, Ecclesall-rd., Walton, Stone, £6,350; (4) *W. J. Baddeley, Stallington-rd., Blythe Bridge, Stoke-on-Trent, £6,200; (10) *Madew & Wardle, Ltd., Central Works, Market-la., Newcastle, Staffs, £15,770; (20) *Morgan Building Co., Birmingham, £26,624.

Tamworth.—24 houses (34 dwellings, including flats) at Fazeley-rd. site. B.E. & S.: *Crossley Bros. (Builders), Ltd., 65, Thurston-ave., Sheldon, Birmingham, £29,872.

Walsall.—Houses and bungalows for T.C. 16 houses: *Asphalt & Public Works, Ltd.; 8 bungalows and 8 houses at Dartmouth-pl.: *Asphalt & Public Works, Ltd., £17,387; 27 bungalows at Slater's-la.: *George Wright (Wolverhampton), Ltd., £23,796 (subject to M.H. approval).

Wandsworth.—Works, for B.C. Six and eight-storey blocks of flats and maisonettes (total 232 dwellings) comprising third stage of development of Notre Dame site, Clapham:—

Wilson Lovatt & Sons, Ltd.	£590,856
Geo. Parker & Sons, Ltd.	587,240
Rowley Bros., Ltd.	578,755
Trollope & Colls, Ltd.	576,829
Gee, Walker & Slater, Ltd.	559,874
*William Moss & Sons, Ltd., North Circular-rd., Cricklewood, N.W.2	537,564

48 flats (one six-storey block and two three-storey blocks) at Nutwell-st. housing site:—

Head & Son, Ltd.	£96,136
Gorham (Contractors), Ltd.	94,500
Unera Construction Co., Ltd.	94,057
Clarke, Barton & Co., Ltd.	92,721
Griggs & Son, Ltd.	92,647
John Lewis Building, Ltd.	91,000
Geo. Parker & Sons, Ltd.	90,952
Tersons, Ltd.	88,996
E. H. Smith (Croydon), Ltd.	88,677
The Unit Construction Co., Ltd.	88,500
*Kirk & Kirk, Ltd., 287, Upper Richmond-rd., S.W.15	87,800

Two-storey block of 12 flats at Sadler's building site, Putney:—

Spinks & Denning, Ltd.	£19,885
Hunter & Clark, Ltd.	18,589
Raff & Son, Ltd.	17,408
Snelling & Rayment	16,962
Bunting Construction Co., Ltd.	16,930
Amalgamated Building Contractors	16,834
W. T. Ward, Ltd.	16,768
Unera Construction Co., Ltd.	16,372
Drury & Co., Ltd.	16,240
Gorham (Contractors), Ltd.	16,059
*H. J. Walker & Sons, Station-rd., Fishponds, Bristol	15,617

West Bromwich.—Works for T.C. H. Schofield, B.Sc., A.M.Inst.C.E., B.S., Town Hall. Police houses, selected sites. *W. F. Pointer & Sons, Ltd., £5,915; repairs to miners' cottages. *A. J. Smith, 39, Pill-st., West Bromwich, £3,586.

West Hartlepool.—Alterations to staff accommodation at the Municipal-bldgs. for T.C. S. M. Richmond, Boro' A.: *Direct Labour, £4,700.

FEDERATION OF MASTER BUILDERS

A Message from

SIR HARRY R. SELLEY, J.P.

President of the
Federation of Master Builders

In spite of the many difficulties with which all Industry is faced, and the Building Industry in particular, at the close of 1948 we look forward with courage and hope for the future.

That the age-old message (Peace on Earth and Good Will towards Men) may be realised is the earnest prayer of your President in wishing all members of the Federation and the Industry—

A
Happy Christmas
and
A Prosperous
New Year!

26, Gt. Ormond St., Holborn, W.C.1.
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